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PART IV

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

■

FISHERY PRODUCTS

Clarification and Recodification of U.S. Grade Standards

[3510–12]

Title 50—Wildlife and Fisheries

CHAPTER II—NATIONAL MARINE FISHERIES SERVICE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION DEPARTMENT OF COMMERCE

SUBCHAPTER G—PROCESSED FISHERY PRODUCTS, PROCESSED PRODUCTS THEREOF, AND CERTAIN OTHER PROCESSED FOOD PRODUCTS

U.S. STANDARDS FOR GRADES OF FISHERY PRODUCTS

Recodification and Clarification

AGENCY: National Marine Fisheries Service, Commerce.

ACTION: Final rule.

SUMMARY: The purpose of this rule is to recodify and clarify the Code of Federal Regulations that pertain to U.S. Standards for Grades of Fishery Products. The product quality standards have been reorganized into groups of similar products and new designations have been assigned to these groups.

EFFECTIVE DATE: September 28, 1977.

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION: On January 11, 1977, a notice was published in the FEDERAL REGISTER (42 FR 2326) relative to recodification of Parts 260 through 279 of Title 50 CFR. New part and subpart designations were identified. The following table indicates these changes.

New Part 50 CFR	Old Part 50 CFR
260 Subpart A	260
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265–279 (Reserved)	—

Part 260 has been redesignated as Part 260 Subpart A, Inspection and Certification of Establishments and Fishery Products for Human Consumption. The section numbers for Part 260 Subpart A have not changed.

To clarify the recodification, the entire text of all the product quality standards is republished with the redesignated Parts and Subparts, and new section numbers. This republication will facilitate use of these standards, allow easier comparison of similar provisions among like products, and minimize confusion.

It has been determined that this document does not substantially affect any member of the public. Under the administrative procedures provisions in U.S.C. 553, it is found to be impracticable, and contrary to the public interest to delay the effectiveness of this rule until 30 days after publication in the FEDERAL REGISTER in that (1) no substantive rule or change in rule is involved and (2) recodification in the Code of Federal Regulations involves editorial and clarification changes only.

Dated: September 23, 1977.

ROBERT W. SCHONING,
Director, National Marine Fisheries Service.

Accordingly, the U.S. Standards for Grades of Fish and Fishery Products are recodified as follows:

PART 261—UNITED STATES STANDARDS FOR GRADES OF WHOLE OR DRESSED FISH

Subpart A—United States Standards for Grades of Whole or Dressed Fish

Sec.

261.101 Scope and product description.
261.102 Product forms.
261.103 Grades—quality factors.
261.104 Determination of grade.
261.105 Hygiene.

Subpart B—United States Standards for Grades of Frozen Headless Dressed Whiting

261.151 Description of the product.
261.152 Grades of frozen headless dressed whiting.
261.161 Determination of the grade.
261.171 Definitions and methods of analysis.
261.175 Tolerances for certification of officially drawn samples.

AUTHORITY: 7 U.S.C. 1621–1630.

Subpart A—United States Standards for Grades of Whole or Dressed Fish

§ 261.101 Scope and product description.

This standard shall apply to whole or dressed fish, whether fresh or frozen, of any species suitable for use as human food and processed and maintained in accordance with good manufacturing practices.

§ 261.102 Product forms.

(a) *Types.* (1) Fresh.
(2) Frozen solid packs; glazed or unglazed.
(3) Frozen individually; glazed or unglazed.
(b) *Styles.* (1) Whole.
(2) Dressed-eviscerated.
(3) Head-on or headless.
(4) With or without fins.
(5) Skin-on scaled or unscaled; semi-skinned (epidermis removed) or skinless.
(6) Other (as specified).

§ 261.103 Grades—quality factors.

(a) *U.S. Grade A.* Whole or dressed fish shall:
(1) Possess good flavor and odor and;
(2) Comply with the limits for defects for U.S. Grade A quality in accordance with § 261.104.

(b) *U.S. Grade B.* Whole or dressed fish shall:
(1) Possess reasonably good flavor and odor and;
(2) Comply with the limits for defects for U.S. Grade B quality in accordance with § 261.104.

(c) *Substandard.* Whole or dressed fish does not possess reasonably good flavor and odor and/or exceeds the limits for defects for U.S. Grade B quality in accordance with § 261.104.

§ 261.104 Determination of grade.

(a) *Procedures for grade determination.* The grade shall be determined by sampling in accordance with the sampling plan described in paragraph (b) of this section evaluating odor and flavor in accordance with paragraph (c) of this section examining for defects in accordance with paragraphs (d), (e) and (f) of this section and using the results to assign a grade as described in paragraph (g) of this section.

(b) *Sampling.* The sampling rate of specific lots for all inspections, other than for military procurement, shall be in accordance with the sampling plans contained in Part 260 of this chapter except that the sampling unit is ten (10) fish for fish weighing up to 10 pounds. Fish weighing over ten (10) up to fifty (50) pounds—the sample unit shall be five (5) fish. For fish weighing over fifty (50) pounds, the sample unit shall be a minimum of three (3).

(c) *Evaluation of flavor and odor.* (1) Evaluation of the odor on each of the raw fish in the sample unit shall be carried out as follows:

(i) For the examination of small units, break the flesh or thawed sample either with the thumbs or by cutting with a knife in several places. Hold the cut or broken flesh close to the nose for evaluation.

(ii) For the examination of large units, a core may be used. Drill a hole into the hard frozen fish with a high-speed quarter inch drill. As soon as the drill is withdrawn, the hole and drillings are smelled.

(2) If the results of the raw odor evaluation indicate the existence of any off-odors, the sample shall be cooked by any of the methods set forth below to verify the flavor and odor.

(i) *Boil in bag method.* Insert the sample into a boilable film-type pouch; fold the open end of the pouch over a suspension bar and clamp in place to provide a loose seal after evacuating the air by immersing the pouch into boiling water. Cook the contents for 20 minutes (until the internal temperature of the product reaches 160 degrees F.).

(ii) *Steam method.* Wrap the sample in a single layer of aluminum foil, and place on a wire rack suspended over boiling water in a covered container. Steam the packaged product for 20 minutes.

(iii) *Bake method.* Package the product as previously described. Place the packaged product on a flat cookie sheet or shallow flat-bottom pan of sufficient size so that the packages can be evenly spread on the sheet or pan. Place the pan and frozen contents is a properly ven-

tilated oven preheated to 400 degrees F. for 20 minutes.

(3) The amount of material to be cooked shall be based on the results of the raw odor evaluation. A minimum of 25 percent of the sample except that not less than 3 sample units shall be used.

(d) *Examination for physical defects.* Each of the fish in the sample will be examined for defects using the list of defect definitions, and the defects noted and categorized as minor, major, and serious in accordance with Table 1.

(e) *Definitions of defects in whole or dressed fish.* (1) "Abnormal condition" means that the normal physical and/or chemical structure of the fish flesh has been sufficiently changed so that the usability and/or desirability of the fish is adversely affected. It includes, but is not limited to, the following examples:

(i) Jellied—refers to the abnormal condition wherein a fish is partly or wholly characterized by a gelatinous, glossy, translucent appearance.

(ii) Milky—refers to the abnormal condition wherein a fish is partly or wholly characterized by a milky-white, excessively mush, pasty, or fluidized appearance.

(iii) Chalky—refers to an abnormal condition wherein a fish is partly or wholly characterized by a dry, chalky, granular appearance, and fiberless structure.

(A) Moderate—refers to a condition that is distinctly noticeable but does not seriously affect the appearance, desirability and/or the eating quality of the product.

(B) Excessive—refers to a condition which is both distinctly noticeable and seriously objectionable.

(2) "Appearance defects" shall refer to the overall general appearance of the fish (consistency of the flesh, odor, eyes, gills, and skin) and presence of excessive blood or drip and appearance of the package.

(i) Slight—refers to an appearance defect that is slightly noticeable but does not seriously affect the appearance, desirability, and/or eating quality of the fish.

(ii) Moderate—refers to an appearance, defect that is conspicuously noticeable but does not seriously affect the appearance, desirability, and/or eating quality of the fish.

(iii) Excessive—refers to an appearance defect that is conspicuously noticeable and that does seriously affect the appearance, desirability and/or eating quality of the fish.

(3) "Discoloration" refers to any color not characteristic of the species used.

(i) Slight—refers to the area affected by discoloration of significant intensity involving up to 10 percent of the total area.

(ii) Moderate—refers to the area affected by discoloration of significant intensity involving over 10 percent and up to 50 percent of the total area.

(iii) Excessive—refers to the area affected by discoloration of significant intensity involving over 50 percent of the total area.

(4) "Dehydration" refers to loss of moisture from fish surfaces during frozen storage. For skin-on fish, dehydration shall be evaluated by degree of dullness and shrinkage.

(i) Slight dehydration—is surface color masking affecting more than 3 percent of the area which can be readily removed by scraping with a blunt instrument.

(ii) Moderate dehydration—is deep color masking penetrating the flesh, affecting less than 3 percent of the area, and requiring a knife or other sharp instrument to remove.

(iii) Excessive dehydration—is deep color masking penetrating the flesh, affecting more than 3 percent of the area, and requiring a knife or other sharp instrument to remove.

(5) "Surface defects" shall refer to the following where applicable:

(i) Scales. An occurrence of attached or loose scales in any sample unit (where applicable).

(ii) Blood spot. An accumulation of coagulated opaque, masses of blood on a fish.

(iii) Fins or pieces of fin. An occurrence or absence of attached or loose fins or pieces of fin in any sample unit (where applicable). Dorsal spine shall be removed (where applicable).

(iv) Skin. The presence of the dark or light inner layers of skin for skinless. For semiskinned, reference is to the presence of the dark outside layers.

(v) Bruises. An accumulation of damaged portions of fish muscle, red and opaque in appearance (on a fish).

(vi) Damage to protective coating refers to voids in ice glaze or tears in covering membrane, also to breaks or splits in the skin which are readily discernible and not normally part of the processing.

(6) "Cutting and trimming defects" refers to the following:

(i) Body cavity cuts—refers to misplaced cuts made during evisceration.

(ii) Improper heading (as specified)—refers to the presence of pieces of gills, gill cover, pectoral fins (spine), or collarbone after the fish have been headed. No ragged cuts should be evident after heading.

(iii) Evisceration defects—refers to inadequate cleaning of the belly cavity of the fish. All viscera, kidney (where applicable), spawn, and blood should be removed.

(A) Slight degree of improper evisceration and improper heading refers to a condition that is scarcely noticeable but does not affect the apearance, desirability, and/or eating quality of the fish.

(B) Moderate degree of improper evisceration and improper heading refers to a condition that is conspicuously noticeable but does not seriously affect the appearance, desirability, and/or eating quality of the fish.

(C) Excessive degree of improper evisceration refers to a condition that is conspicuously noticeable and that seriously affect the appearance, desirability, and/or eating quality of the fish.

(iv) Improper washing — inadequate removal of slime, blood, and bits of viscera from the surface of the fish and from the body cavity.

(v) Belly burn—an enzymatic action on the flesh causing a burned or discolored appearance.

(7) "Texture defects", texture of the cooked fish; not characteristic of the species.

(i) Slight—fairly firm, only slightly tough or rubbery, does not form a fibrous mass in the mouth, moist but not mushy.

(ii) Moderate—moderately tough or rubbery, has noticeable tendency to form a fibrous mass in the mouth, moist but not mushy.

(iii) Excessive—excessively tough or rubbery, has marked tendency to form a fibrous mass in the mouth, or is very dry or very mushy.

(f) *Categorization of physical defects.*

TABLE I

Physical defects		Categories		
Types	Degree	Minor	Major	Serious
Abnormal condition	Moderate		201	
	Excessive			301
Appearance defects	Slight	102		
	Moderate		202	
	Excessive			302
Discoloration	Slight	103		
	Moderate		203	
	Excessive			303
Dehydration	Slight—more than 3 percent area affected and easily removed.	104		
	Moderate—less than 3 percent area affected but difficult to remove.		204	
	Excessive—greater than 3 percent area affected			304
Surface defects	Slight—3 to 10 percent area affected	105		
	Moderate—greater than 10 percent area affected		205	
Cutting and trimming defects.	Body cavity cuts	106		
	Improper heading:			
	Slight	107		
	Moderate		206	
	Evisceration defects:			
	Slight	108		
	Moderate		207	
	Excessive			305
	Improper washing	109		
	Belly burn		208	
Texture defects	Slight	110		
	Moderate		209	
	Excessive			306

NOTE.—The code numbers shown in the above table are for identification of defects for recording purposes only and are keyed to the nature and severity of the defect. They are not scores.

(g) *Grade assignment.* (1) Each fish in a sample unit will be assigned the grade into which it falls in accordance with the limits for defects, summarized as follows:

	Flavor and odor	Maximum number of physical defects permitted		
		Minor	Major	Serious
Grade A	Good	3	0	
Grade B	Reasonably good	5	1	

(2) Upon determination of grade of each fish in each sample unit, the sample will be designated a grade as follows:

(i) *Grade A.*

Number of subsample units (fish)	Minimum number of grade A fish	Maximum number of grade B fish	Maximum number of substandard
10 (up to 10 lb)	8	2	0
5 (10-50 lb)	4	1	0
3 (over 50 lb)	3	0	0

(ii) *Grade B.*

Number of subsample units (fish)	Minimum number of grade B fish	Maximum number of substandard
10 (up to 10 lb.)	8	2
5 (10-50 lb.)	4	1
3 (over 50 lb.)	3	0

(iii) *Substandard.* Any fish not meeting the minimum requirements for Grade B quality.

(3) Upon determination of the grade for each sample unit a lot of whole or dressed fish shall be assigned that grade in which:

(i) For physical defects, the number of sample units in the next lower grade does not exceed the acceptance number for deviants prescribed in Part 260.61 of the sampling plan, Table II, of Title 50; and

(ii) Not more than 5 percent of the fish in the sample (total fish examined per lot) are in the next lower grade for odor and/or flavor.

NOTE: Sampling for inspection for military procurement shall be in accordance with MIL-STD-105. Lot size shall be expressed in terms of pounds. The sample size shall be in accordance with Inspection Level S-3. Acceptable Quality Levels shall be expressed in terms of defects per hundred units. The AQL's shall be 6.5 for minor and 4.0 for major.

§ 261.105 Hygiene.

Whole or dressed fish shall be processed and maintained in accordance with the applicable requirements of the regulations contained in §§ 260.96 to 260.103 of this chapter and of the good manufacturing practice regulations contained in 21 CFR Part 128.

Subpart B—United States Standards for Grades of Frozen Headless Dressed Whiting

§ 261.151 Description of the product.

The product described in this part consists of clean, wholesome whiting (silver hake) *merluccius bilinearis, merluccius albidus;* completely and cleanly headed and adequately eviscerated. The fish are packaged and frozen in accordance with good commercial practice and are maintained at temperatures necessary for the preservation of the product.

§ 261.152 Grades of frozen headless dressed whiting.

(a) "U.S. Grade A" is the quality of frozen headless dressed whiting that (1) possess a good flavor and odor and that (2) for those factors that are rated in accordance with the scoring system outlined in this part, have a total score of 85 to 100 points.

(b) "U.S. Grade B" is the quality of frozen headless dressed whiting that (1) possess at least reasonably good flavor and odor and that (2) rate a total score of not less than 70 points for those factors of quality that are rated in accordance with the scoring system outlined in this part.

(c) "Substandard" or "Utility" is the quality of frozen headless dressed whiting that meet the requirements of § 261.151 but that otherwise fail to meet the requirements of "U.S. Grade B."

§ 261.161 Determination of the grade.

In a plant under USDC Contract Inspection the grade is determined by examining the product for factors 1–10 in the thawed state and factor 11 in the cooked state. For lot inspection, examination of the product for factors 1, 2, and 3 is carried out in the frozen state and 4–10 in the thawed state. Factor 11 is examined in the cooked state.

(a) *Factors rated by score points.* Points are deducted for variations in the quality of each factor in accordance with the schedule in Table 1. The total of points deducted is subtracted from 100 to obtain the score. The maximum score is 100; the minimum score is 0.

(b) *Factors not rated by score points.* The factor of "flavor and odor" is evaluated organoleptically by smelling and tasting after the product has been cooked in accordance with § 261.171.

(1) Good flavor and odor (essential requirements for a U.S. Grade A product, means that the cooked product has the typical flavor and odor of the species and is free from rancidity, bitterness, staleness, and off-flavors and off-odors of any kind.

(2) Reasonably good flavor and odor (minimum requirements of a U.S. Grade B product) means that the cooked product is lacking in good flavor and odor, but is free from objectionable off-flavors and off-odors of any kind.

TABLE 1.—SCHEDULE OF POINT DEDUCTIONS PER SAMPLE

FROZEN STATE (LOT INSPECTION ONLY)

	Factors scored	Method of determining score	Deduct
1	Arrangement of product [1]	Small degree: 10 percent of fish twisted or bellies and backs not facing the same direction. Large degree: More than 10 percent of fish twisted, void present or some fish cross packed.	2 5
2	Condition of packaging (overall assessment).	Poor: Packaging material has been soaked, softened or deteriorated.	2
3	Dehydration	Small degree: Slight dehydration of the exposed surfaces Large degree: Deep dehydration of the exposed surfaces	2 5

THAWED STATE

	Factors scored	Method of determining score	Deduct
4	Minimum size: Fish 2 oz. or over are of acceptable size.	Number of fish less than 2 oz. per lb. Over 0—not over 0.5 Over 0.5—not over 1.0 Over 1.0—not over 2.0 Over 2.0	 5 10 20 30
5	Uniformity: Weight ratio of fish remaining. The 10 percent largest fish divided by the 10 percent smallest fish.[1]	Weight ratio 10 percent smallest and 10 percent largest: Over 2.0—not over 2.4 Over 2.4—not over 2.8 Over 2.8—not over 3.2 Over 3.2—not over 3.6 Over 3.6	 2 5 10 20 30
6	Heading [1]	Small degree: 10 percent of fish carelessly cut Moderate degree: Over 10 percent of fish carelessly cut	5 15
7	Evisceration (overall assessment).	Small degree: Slight evidence of viscera Moderate degree: Moderate amounts of spawn, viscera, etc. Large degree: Large amounts of viscera, spawn, etc.	2 10 30
8	Scaling [1]	Small degree: 10 percent of fish not well scaled Large degree: Over 10 percent of fish not well scaled	2 5
9	Color of the exposed surfaces (overall assessment).	Small degree: Minor darkening, dulling Large degree: Objectionably dark, brown, dull	2 5
10	Bruises and split or broken skin.	Presence of bruises and/or broken or split skin per pound: Over 0—not over 0.5 Over 0.5—not over 1.0 Over 1.0—not over 1.5 Over 1.5—not over 2.0 Over 2.0	 1 2 4 7 10
11	Texture: (overall assessment)	Small degree: Moderately dry, tough, mushy, rubbery, watery, stringy. Large degree: Excessively dry, tough, mushy, rubbery, watery, stringy.	5 15

[1] 10 percent of fish refers to 10 percent by count rounded to nearest whole fish.

§ 261.171 Definitions and methods of analysis.

(a) *Selection of the sample unit.* The sample unit consists of the primary container and its entire contents. The whiting are examined according to Table 1. Definitions of factors for point deductions are as follows:

(b) *Examination of sample, frozen state.* When this product is examined under USDC Contract Inspection, the samples are examined for factors 1, 2, and 3 in Table 1 in the thawed state. When the product is lot inspected, the samples are examined for factors 1, 2, and 3 in Table 1 in the frozen state.

(1) *"Arrangement of product"* refers to the packing of the product in a symmetrical manner, bellies or backs all facing in the same direction, fish neatly dovetailed.

(2) *"Condition of the packaging material"* refers to the condition of the cardboard or other packaging material of the primary container. If the fish is allowed to stand after packing and prior to freezing moisture from the fish will soak into the packaging material and cause deterioration of that material.

(3) *"Dehydration"* refers to the presence of dehydrated (water-removed) tissue on the exposed surfaces of the whiting. Slight dehydration is surface dehydration which is not color-masking. Deep dehydration is color-masking and cannot be removed by scraping with a fingernail.

(c) *Examination of sample, thawed state.* Thawed state means the state of the product after being thawed. Thawing the sample is best accomplished by enclosing the sample in a film type bag and immersing in an agitated water bath held at 68° F., ±2° F. Allow the product to remain immersed until thawed. Alternatively when the facilities are lacking for water thawing, the sample may be thawed by slacking it out at a temperature between 30° to 40° F. on an aluminum tray from 2 hours for a 1½-pound sample to 8 hours for a 10-pound sample.

(1) *"Minimum size"* refers to the size of the individual fish in the sample. Fish 2 ounces or over are considered acceptable. Smaller fish cannot be cooked uniformly with acceptable size fish. Separate the fish of unacceptable size, divide their number by the weight of the sample in pounds, and apply to Table 1. Example—four fish of unacceptable size in a 5-pound package is $\frac{4}{5}$ =0.8, a 10 point deduction.

(2) *"Uniformity."* From the fish remaining, select by count 10 percent (minimum of one fish) of the largest and 10 percent (minimum of one fish) of the smallest and divide the largest weight by the smallest weight to get a weight ratio.

(3) *"Heading"* refers to the condition of the fish after they have been headed. The fish should be cleanly headed behind the gills and pectoral fins. No gills, gill bones, or pectoral fins should remain after the fish have been headed.

(4) *"Evisceration"* refers to the cleaning of the belly cavities of the fish. All spawn, viscera, and belly strings should be removed.

(5) *"Scaling"* refers to the satisfactory removal of scales from the fish.

(6) *"Color of the cut surfaces" refers* to the color of the cut surfaces of the fish after heading and other processing.

(7) *"Bruises and broken or split skin"* refers to bruises over one-half square inch in area and splits or breaks in the skin more than one-half inch in length which are not part of the processing.

(d) *Examination of sample, cooked state.* Cooked state means the state of the sample after being cooked. Cooking the sample is best accomplished by inserting the sample into a film type bag and submerging it into boiling water for from 18–20 minutes. A minimum of three fish per sample unit shall be cooked.

(1) *"Texture defects"* refers to the absence of normal textural properties of the cooked fish flesh, which are tenderness, firmness, and moistness without excess water. Texture defects are dryness, softness, toughness, and rubberyness.

(e) *General definitions.*

(1) *Small* (overall assessment) refers to a condition that is noticeable but is only slightly objectionable.

(2) *Moderate* (overall assessment) refers to a condition that is distinctly noticeable but is not seriously objectionable.

(3) *Large* (overall assessment) refers to a condition which is both distinctly noticeable and seriously objectionable.

§ 261.175 Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified in accordance with Part 260 Subpart A of this chapter. (Regulations Governing Processed Fishery Products.)

PART 262—UNITED STATES STANDARDS FOR GRADES OF FISH STEAKS

Subpart A—[Reserved]

Subpart B—United States Standards for Grades of Frozen Halibut Steaks

Sec.
262.151 Product description.
262.152 Styles of frozen halibut steaks.
262.153 Grades of frozen halibut steaks.
262.156 Recommended dimensions.
262.161 Ascertaining the grade.
262.171 Definitions and methods of analysis.
262.175 Tolerances for certification of officially drawn samples.
262.181 Score sheet for frozen halibut steaks.

Subpart C—United States Standards for Grades of Frozen Salmon Steaks

262.201 Product description.
262.202 Styles of frozen salmon steaks.
262.203 Grades of frozen salmon steaks.
262.206 Recommended dimensions.
262.211 Ascertaining the grade.
262.221 Definitions.
262.225 Tolerances for certification of officially drawn samples.
262.231 Score sheet for frozen salmon steaks.

AUTHORITY: 7 U.S.C. 1621–1630.

Subpart A—[Reserved]

Subpart B—United States Standards for Grades of Frozen Halibut Steaks

§ 262.151 Product description.

Frozen halibut steaks are clean, wholesome units of frozen raw fish flesh with normally associated skin and bone and are 2 ounces of more in weight. Each steak has two parallel surfaces and is derived from whole or subdivided halibut slices of uniform thickness which result from sawing or cutting perpendicularly to the axial length, or backbone, of a whole halibut. The steaks are prepared from either frozen or unfrozen halibut (Hippoglossus spp.) and are processed and frozen in accordance with good commercial practice and are maintained at temperatures necessary for the preservation of the product.

§ 262.152 Styles.

(a) *Style I, random weight pack.* The individual steaks are of random weight and neither the weight nor the range of weights are specified.

(b) *Style II, uniform weight or portion pack.* All steaks in the package or in the lo, are of a specified weight or range of weights.

§ 262.153 Grades.

(a) "U.S. Grade A" is the quality of frozer halibut steaks which possess good flavor and odor, and that for those factors which are rated in accordance with the scoring system outlined in the following sections the total score is not less than 85 points.

(b) "U.S. Grade B" is the quality of frozen halibut steaks which possess at least reasonably good flavor and odor, and that for those factors which are rated in accordance with the scoring system outlined in the following sections the total score is not less than 70 points.

(c) "Substandard" is the quality of frozen halibut steaks which fail to meet the requirements of the "U.S. Grade B."

§ 262.156 Recommended dimensions.

(a) The recommended dimensions of frozen halibut steaks are not incorporated in the grades of the finished product since dimensions, as such, are not factors of quality for the purpose of these grades. However, the degree of uniformity of thickness among units of the finished product is rated since it is a factor affecting the quality and utility of the product.

(b) It is recommended that the thickness (smallest dimension) of individually frozen halibut steaks be not less than ½ inch and not greater than 1¼ inches.

§ 262.161 Ascertaining the grade.

The grade is ascertained by observing the product in the frozen, thawed, and cooked states and is evaluated by consideration of the following:

(1) *Factors rated by score points.* The quality of the product with respect to scored factors is expressed numerically. Cumulative point deductions are

assessed for variations of quality for each factor in accordance with the schedule in Table I, in the frozen, thawed, and cooked states. The total deduction is subtracted from the maximum possible score of 100 to obtain the product score.

(2) *Factors not rated by score points.* The factors of flavor and odor are evaluated organoleptically in the cooked state for both the light and dark meat (surface fat) and are defined as follows:

(i) *Good flavor and odor.* "Good flavor and odor" (essential requirement for Grade A) means that the fish filesh has the good flavor and odor characteristics of halibut, and is free from rancidity and from off-flavors and off-odors.

(ii) *Reasonably good flavor and odor.* "Reasonably good flavor and odor" (minimum requirement for Grade B) means that the fish flesh may be somewhat lacking in the good flavor and odor characteristic of halibut, is reasonably free of rancidity, and is free from objectionable off-flavors and off-odors.

(iii) *Substandard flavor and odor.* "Substandard flavor and odor" (Substandard grade) means that the flavor and odor fail to meet the requirements of "reasonably good flavor and odor."

(3) *Determination of final product grade.* The final product grade is derived on the basis of both the product score as determined by the "factors rated by score points" and the grade requirements of flavor and odor as defined under "factors not rated by score points." The lower of the two determines the final grade.

TABLE I—SCHEDULE OF POINT DEDUCTIONS FOR FACTORS RATED BY SCORE POINTS [1]

	Factor	Description of quality variation	Deduct
Frozen	1. Dehydration [2]	Per steak Surface area affected: Less than 1 square inch but obvious 1 to 2 square inches Above 2 square inches	 1 2 3
	2. Percentage glaze	Over 0.0, not over 6.0 percent by weight of sample unit Over 6.0, not over 7.0 Over 7.0, not over 8.0 Over 8.0, not over 9.0 Over 9.0	0 1 2 3 4
	3. Uniformity of thickness	For each 1/16 inch above 1/8 inch variation in steak thickness (maximum total deduction permitted 6 points per sample unit).	2
	4. Uniformity of weight and minimum weight.	Style I—Random weight.—Use either (a) or (b), whichever gives a greater deduction. (a) For each steak less than 3.0 ounces in weight per sample package. (b) For each 0.1 ounce below 4.0 ounces in average steak weight per sample. Style II—Uniform weight or portions.—For each full 1 percent of the steaks deviating by more than 0.6 ounce from the specified portion weight or the average of the specified portion range (per sample package).	 4 ½ 2
Thawed	5. Workmanship—Defects of: Cutting, collar bone, loose skin, fins, blood spots, bruises, foreign material, backbone, cartilage, sawdust.	Slight or moderate Excessive (For each defect, per occurrence, per sample package or per 2 pounds for packages over 2 pounds net weight.)	1 2
	6. Color defects:		
	(a) Discoloration of drip liquor	(Per sample unit) Slight Moderate Excessive	1 2 3
	(b) Discoloration of light meat [3]	(Per steak) Slight Moderate Excessive	1 2 3
	(c) Discoloration of dark meat [3]	(Per steak) Slight Moderate Excessive	1 2 3
	(d) Non-uniformity of color	(Per sample unit) Slight Moderate Excessive	1 2 3
	7. Honeycombing [3]	(Per steak) Surface area affected: 26 to 50 percent 51 to 75 percent 76 to 100 percent	 ½ 1 2
Cooked	8. Texture defect [3] (tough, dry, fibrous, or watery).	(Per steak) Slight Moderate Excessive	1 2 3

[1] This schedule of point deductions is based on the examination of sample units composed of: (a) An entire sample package and its contents (for retail sized packages) or (b) a representative subsample consisting of three or more halibut steaks taken from each sample package (for institutional sized packages), except that the entire sample package shall be examined for factor 4.

[2] Point deductions for these factors are based on a 3-steak sample unit. For samples containing other than 3 steaks per sample unit or per package, multiply the results by the correction factor $\frac{3}{n}$ where n equals the number of steaks.

§ 262.171 Definitions and methods of analysis.

(a) "Percentage glaze" on halibut steak means the percent by weight of frozen coating adhering to the steak surfaces and includes the frost within the package. It is determined by the method described below or by methods giving equivalent results.

(1) *Equipment needed.* (i) Source of cold tap water with aerated faucet.

(ii) Balance accurate to 0.1 gm.; or 0.01 ounce.

(iii) Paper towels.

(iv) Small knife.

(2) *Procedure.* (i) Weigh package in overwrap and all its contents (A).

(ii) Remove steaks and loose frost; weigh dry packaging (B).

(iii) The difference in weight, A–B represents weight of steaks plus glaze (C).

(iv) Remove glaze from halibut steaks.

(a) Adjust tap water to a flow rate of about 3 quarts/min. through an aerated faucet.

(b) Direct 50° to 60° F. tap water onto skin side of steak while gently feeling and rubbing cut surfaces with finger tips (if necessary, temperatures up to 80° F. may be used but require closer control).

(c) When all glaze is removed from cut flesh surface, as evidenced by absence of slick feel to fingers, remove steak from water.

(d) Rapidly remove excess water with single paper towel before it has time to refreeze on the steak, and flick off residual skin glaze by knife or hand.

(e) Repeat steps (b), (c), and (d) on each steak in package or sample unit.

(f) Weigh deglazed halibut steaks (D, actual net weight of sample).

(Steps (a) through (f) of this subdivision are completed within 3 minutes.)

(v) Calculate percentage glaze: Percentage glaze $=\frac{C-D}{D}\times 100$.

(b) "Cooked state" means that the thawed product has been cooked in a suitable manner which is defined as being heated submerged in boiling water, unseasoned, and in a boilable film type pouch for 10 minutes. (Steaks over 1 inch in thickness may require 5 additional minutes for heating.)

(c) Uniformity of thickness means that the thickness is substantially the same for one or more steaks within a package or sample unit.

(d) Color defects:

(1) "Discoloration of drip liquor" means that the free liquid which drains from the thawed steaks is discolored with blood residue usually from the dorsal aorta of the halibut.

(2) "Discoloration of light meat" means that the normal flesh color of the main part of the halibut steak has darkened due to deteriorative influences.

(3) "Discoloration of the dark meat" means that the normal color of the surface fat shows increasing degrees of yellowing due to oxidation.

(4) "Nonuniformity of color" refers to noticeable differences in color on a single steak or between adjacent steaks in the same package.

(e) "Dehydration" refers to the appearance of a whitish area on the surface of a steak due to the removal of water or drying of the affected area.

(f) "Honeycombing" refers to the visible appearance of numerous discrete holes or openings of varying size on the steak surface.

(g) "Workmanship defects" refers to appearance defects that were not eliminated during processing and are considered either objectionable or poor commercial practice.

(h) "Texture defect" refers to an undesirable increase in toughness and/or dryness, fibrousness, and watery nature of halibut examined in the cooked state.

§ 262.175 Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified on the basis of Part 260 Subpart A of this chapter. (Regulations Governing Processed Fishery Products.)

§ 262.181 Score sheet for frozen halibut steaks.

GENERAL

Label.....
Size and kind of container.....
Container mark or identification.....
Size of lot.....
Number of samples.....
Actual net weight (ounces).....
Number of steaks per container.....
Product style.....

Scored factors (table 1)	Deductions
Frozen:	
1. Dehydration	
2. Percentage glaze	
3. Uniformity of thickness	
4. Uniformity of weight	
Thawed:	
5. Workmanship	
6. Color defects	
7. Honeycombing	
Cooked:	
8. Texture	
Total deductions	
Rating for scored factors (100—Total deductions)	

Unscored factors	Rating
Cooked:	
a. Odor	
b. Flavor (light meat)	
(dark meat)	
Flavor and odor rating	

Final grade.....

Subpart C—United States Standards for Grades of Frozen Salmon Steaks

§ 262.201 Product description.

Frozen salmon steaks are clean, wholesome units of frozen raw fish flesh with normally associated skin and bone and are 2.5 ounces or more in weight. Each steak has two parallel surfaces and is derived from whole or subdivided salmon slices of uniform thickness which result from sawing or cutting dressed salmon perpendicularly to the axial length, or backbone. The steaks are prepared from either frozen or unfrozen salmon (Oncorhynchus spp.) and are processed and frozen in accordance with good commercial practice and are maintained at temperatures necessary for the preservation of the product. The steaks in an individual package are prepared from only one species of salmon.

(a) *Species.* Frozen salmon steaks covered by this standard are prepared from salmon of any of the following species:

Silver or coho (O. kisutch).
Chum or keta (O. keta).
King, chinook, or spring (O. tshawytscha).
Red, sockeye (O. nerka).
Pink (O. gorbuscha).

§ 262.202 Styles.

(a) *Style I—Random weight pack.* The individual steaks are of random weight and neither the individual steak weight not the range of weights is specified. The steaks in the lot represent the random distribution cut from the head to tail of a whole dressed salmon.

(b) *Style II—Random weight combination pack.* The individual steaks are of random weight and neither the individual steak weight not range of weights is specified. The steaks in the lot represent a combination of cuts from selected parts of the whole dressed salmon.

(c) *Style III—Uniform weight or portion pack.* All steaks in the package or in the lot are of a specified weight or range of weights.

§ 262.203 Grades.

(a) "U.S. Grade A" is the quality of frozen salmon steaks that possess good flavor and odor, and that for those factors which are rated in accordance with the scoring system outlined in the following sections the total score is not less than 85 points.

(b) "U.S. Grade B" is the quality of frozen salmon steaks that possess at least reasonably good flavor and odor, and that for those factors which are rated in accordance with the scoring system outlines in the following sections the total score is not less than 70 points.

(c) "Substandard" is the quality of frozen salmon steaks that fail to meet the requirements of the "U.S. Grade B."

§ 262.206 Recommended dimensions.

(a) The recommended dimensions of frozen salmon steaks are not incorporated in the grades of the finished product since dimensions, as such, are not factors of quality for the purpose of these grades. However, the degree of uniformity of thickness among units of the finished product is rated since it is a factor affecting the quality and utility of the product.

(b) It is recommended that the thickness (smallest dimension) of individually frozen salmon steaks be not less than ½ inch and not greater than 1½ inches.

§ 262.211 Ascertaining the grade.

The grade is ascertained by observing the product in the frozen, thawed, and cooked states and is determined by consideration of the following:

(a) *Factors rated by score points.* The quality of the product with respect to all factors is scored numerically. Cumulative point deductions are assessed for variations of quality for the factors in accordance with the schedule in Table I, in the frozen, thawed, and cooked states. The total deduction is subtracted from the maximum possible score of 100 to obtain the "product score."

(b) *Factors governed by "limiting rule".* The factors of flavor and odor, in addition to being rated by score points, are further considered for compliance with the "limiting rule" grade requirements of flavor and odor in Table I, as defined under Definitions § 262.221(g)(9).

(c) *Determination of the final product grade.* The final product grade is derived on the basis of both the "product score" and the "limiting rule" grade requirements of flavor and odor, per Table I.

TABLE I—SCHEDULE OF POINT DEDUCTIONS FOR FACTORS RATED BY SCORE POINTS [1]

Scored factors	Description of quality variation	Deduct
FROZEN		
1. General appearance defects	Per occurrence:	
	Slight	1-2
	Moderate	3-4
	Excessive	5-10
2. Dehydration	(Per occurrence) for each 1 sq. inch of surface area	1
3. Uniformity of thickness	For each 1/16 inch above 1/4" variation tolerance in steak thickness (max. deduction: 6 points).	2
4. Uniformity of weight and minimum weight	Style I & II—Random weight. For each steak between 2.5 and 3.0 ounces in weight per package, or per pound of product for packages over 1 pound net wt.	4
	Style III—Uniform weight or portion. For each 0.1 ounce beyond the 0.1 ounce tolerance of the specified portion weight range per 5 lbs. of product.	1
THAWED		
5. Workmanship defects: Blood spots, bruises, cleaning, cutting, fins, foreign material, collarbone, girdle, loose skin, pugh marks, sawdust, scales.	Per occurrence:	
	Slight	1
	Moderate	2-4
	Excessive	5-8
6. Color defects:		
(a) Discoloration of fatty portion	Slight	1-2
	Moderate	3-5
	Excessive	6-10
(b) Discoloration of lean portion	Slight	1-2
	Moderate	3-5
	Excessive	6-10
(c) Non-uniformity of color	Slight	1-2
	Moderate	3-4
	Excessive	5-6

See footnotes 1 and 2 at end of table.

TABLE I—SCHEDULE OF POINT DEDUCTIONS FOR FACTORS RATED BY SCORE POINTS [1]—Continued

Factor	Description of quality variation	Deduct
7. Honeycombing	Percent sample area affected:	
	26 to 50	1
	51 to 75	2
	75 to 100	3
COOKED		
8. Texture defect (tough, dry, fibrous, or watery)	Slight	1-2
	Moderate	3-5
	Excessive	6-10
9. Odor [2]	Good (A)	0-2
	Reasonably good (B)	3-5
	Substandard (S)	6-15
10. Flavor:		
(a) Lean portion	Good (A)	0-2
	Reasonably good (B)	3-5
	Substandard (S)	6-15
(b) Fatty portion	Good (A)	0-2
	Reasonably good (B)	3-5
	Substandard (S)	6-15

[1] This schedule of point deductions is based on the examination of sample units composed of: (a) An entire sample package and its contents (for retail sized packages) or (b) a representative subsample consisting of about one pound of salmon steaks taken from each sample package (for institutional sized packages), except that the entire sample package or its equivalent shall be examined for factor 4.

[2] "Limiting rule" grade requirements of flavor and odor: Salmon steaks which received over 5 deduction points for odor, or flavor of the lean, or flavor of the fatty portion, shall not be graded above substandard, and those which receive between 3 to 5 points shall not be graded above "U.S. Grade B," regardless of the total product score. (This is a "limiting rule" based on flavor and odor as defined under definitions § 262.221(g) (9)).

§ 262.221 Definitions.

(a) "Slight" refers to a defect that is scarcely noticeable and may not affect the appearance, the desirability, and/or eating quality of the steaks.

(b) "Moderate" refers to a defect that is conspicuously noticeable (not seriously objectionable) and does not seriously affect the appearance, desirability and/or eating quality of the steaks.

(c) "Excessive" refers to a defect that is conspicuously noticeable (seriously objectionable) and seriously affects the appearance, desirability, and/or eating quality of the steaks.

(d) "Occurrence" is defined as each incidence of the same or different types of defects.

(e) "Cooked state" means that the thawed, unseasoned product has been heated within a boilable film-type pouch by immersing the pouch with product in boiling water for 10 minutes. Steaks cooked from the frozen state may require about two additional minutes of cooking.

(f) "Actual net weight" means the weight of the salmon steaks within the package after removal of all packaging material, ice glaze or other protective coatings.

(g) "Scored factors" (Table I):

(1) "General appearance defects" refer to poor arrangement of steaks, distortion of steaks, wide variation in shape, between steaks greater than normal number of head and/or tail pieces, imbedding of packaging material into fish flesh, inside condition of package, frost deposit, excessive or non-uniform skin glaze, and undesirable level of natural color.

(2) "Dehydration" refers to the appearance of a whitish area on the surface of a steak due to the evaporation of water or drying of the affected area.

(3) "Uniformity of thickness" means that steak thickness is within the allowed ⅛-inch manufacturing tolerance between the thickest and thinnest parts of the steaks within a package or sample unit.

(4) "Uniformity of weight and minimum weight" is defined in Table I. (Portions are designated by "weight range" or "specified weight." The "weight range" of portions bearing "specified weight" designation on containers shall be taken as the "specified weight" plus or minus 0.5 ounces unless otherwise specified.)

(5) "Workmanship defects" refers to appearance defects that were not eliminated during processing and are considered objectionable or poor commercial practice. They include the following: Blood spots, bruises, cleaning (refers to inadequate cleaning of the visceral cavity from blood, viscera and loose or attached appendages), cutting (refers to irregular, inadequate, unnecessary, or improper cuts and/or trimmings), fins, foreign material (refers to any loose parts, of fish or other than fish origin), collar bone, girdle (refers to bony structure adjacent to fin), loose skin, pugh marks, sawdust and scales.

(6) "Color defects":

(i) "Discoloration of fat portion" means that the normal color of the fat shows increasing degrees of yellowing due to oxidation.

(ii) "Discoloration of lean portion" means that the normal surface flesh color has faded or changed due to deteriorative influences.

(iii) "Nonuniformity of color" refers to noticeable differences in surface flesh color on a single steak or between adjacent steaks in the same package or sample unit. It would also include color variation of the visceral cavity and skin watermarking.

(7) "Honeycombing" refers to the visible appearance on the steak surface of numerous discrete holes or openings of varying size.

(8) "Texture defect" refers to an undesirable increase in toughness and/or dryness, fibrousness, and watery nature of salmon examined in the cooked state.

(9) "Odor" and "flavor:"

(i) "Good flavor and odor" (essential requirement for Grade A) means that the fish flesh has the good flavor and odor characteristic of the indicated species of salmon, and is free from rancidity and from off-flavors and off-odors.

(ii) "Reasonably good flavor and odor" (minimum requirement for Grade B) means that the fish flesh may be somewhat lacking in the good flavor and odor characteristics of the indicated species of salmon, is reasonably free of rancidity, and is free from objectionable off-flavors and off-odors.

(iii) "Substandard flavor and odor" (substandard grade) means that the flavor and odor fail to meet the requirements of "reasonably good flavor and odor."

§ 262.225 Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified on the basis of Part 260 Subpart A of this chapter. (Regulations Governing Processed Fishery Products.)

§ 262.231 Score sheet for frozen salmon steaks.

Label: .....
Size and kind of container: .....
Container mark or identification: .....
Size of lot: .....
Number of packages per master carton: .....
Size of sample: .....
Number of steaks per container: .....
Product style: .....
Actual net weight: .....(ounces).....(lb.)

Scored factors	Deductions
FROZEN	
1. General appearance defects	
2. Dehydration	
3. Uniformity of thickness	
4. Uniformity of weight	
THAWED	
5. Workmanship defects	
6. Color defects	
7. Honeycombing	
COOKED	
8. Texture	
9. Odor (Limiting rule—Table I)	
10. Flavor (Limiting rule—Table I)	
Total deductions	

Product score (100—Total deductions) .....
Flavor and odor rating .....
Final grade .....

PART 263—UNITED STATES STANDARDS FOR GRADES OF FISH FILLETS

Subpart A—[Reserved]

Subpart B—United States Standards for Grades of Cod Fillets

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AUTHORITY: 7 U.S.C. 1621–1630.

Subpart A—[Reserved]

Subpart B—United States Standards for Grades of Cod Fillets

§ 263.151 Product description.

The product described in this part consists of clean, whole, wholesome fillets or primarily large pieces of clean, whole, wholesome fillets, cut away from either side of cod, Gadus morhua or gadus macrocephalus; the fillets may be either skinless or with skin on. They are packaged in accordance with good commercial practice and are maintained at temperatures necessary for the preservation of the product. (This part does not provide for the grading of pieces of fish flesh cut away from previously frozen fish blocks, slabs, or similar products.)

§ 263.152 Grades of cod fillets.

(a) "U.S. Grade A" is the quality of cod fillets that possess good flavor and odor; and for those factors of quality which are rated in accordance with the scoring system outlined in this part the total score is not less than 85 points.

(b) "U.S. Grade B" is the quality of cod fillets that possess at least reasonably good flavor and odor; and for those factors of quality which are rated in accordance with the scoring system outlined in this part the total score is not less than 70 points.

(c) "Substandard" is the quality of cod fillets that fail to meet the requirements of U.S. Grade B.

§ 263.154 Product forms.

(a) Types:
(1) Fresh.
(2) Frozen, solid pack; glazed and unglazed.
(3) Frozen individually; glazed or unglazed.
(b) Styles:
(1) Skin on.
(2) Skinless.

§ 263.156 Recommended weights and dimensions.

(a) The recommendations as to net weights and dimensions of packaged cod fillets are not incorporated in the grades of the finished product since net weights and dimensions, as such, are not factors of quality for the purpose of these grades.

(b) It is recommended that the net weights of the packaged frozen cod fillets be not less than 12 ounces and not over 10 pounds.

§ 263.161 Ascertaining the grade.

The grade of cod fillets is ascertained by examining the product in the fresh or frozen, thawed, and cooked states. The following factors of quality are evaluated in ascertaining the grade of the product: Flavor and odor, appearance, size, absence of defects, and character. These factors are rated in the following manner:

(1) *Flavor and odor.* This factor is rated directly by organoleptic evaluation. Score points are not assessed (see § 263.162).

(2) *Appearance, size, absence of defects, and character.* The relative importance of these factors is expressed numerically on the scale of 100. The maximum number of points that may be given each of these factors are:

Factors	*Points*
Appearance	25
Size	20
Absence of defects	40
Character	15
Total possible score	100

§ 263.162 Evaluation of the unscored factor of flavor and odor.

(a) *Good flavor and odor.* "Good flavor and odor" (essential requirement for a Grade A product) means that the fish flesh has good flavor and odor characteristic of cod (Gadus morhua or Gadus macrocephalus) and is free from staleness, and off-flavor and off-odors of any kind.

(b) *Reasonably good flavor and odor.* "Reasonably good flavor and odor" (minimum requirement of a Grade B product) means that the fish flesh may be somewhat lacking in good flavor and odor; and is free from objectionable off-flavors and off-odors of any kind.

§ 263.163 Evaluation and rating of the scored factors; appearance, size, absence of defects, and character.

The essential variations in quality within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. Point deductions are allotted for each degree or amount of variation within each factor. The net score for each factor is the maximum points for that factor less the sum of the deduction-points within the factor. The total score for the product is the sum of the net scores for the four scored factors.

§ 263.164 Appearance.

(a) The factor of appearance refers to the normal color of the species of fresh or frozen fish flesh, and to the degree and amount of surface dehydration of the frozen product.

(b) For the purpose of rating the factor of appearance the schedule of deduction-points in Tables I and II apply. Frozen cod fillets which receive 25 deduction points for the factor of appearance shall not be graded above Substandard regardless of the total score for the product. This is a limiting rule.

TABLE I—SCORE DEDUCTIONS FOR DISCOLORATION

Color of product	Deduction points	
	"Light" colored portion comprising main portion of fillet	"Dark" colored portion occurring under skin mainly along lateral line
No discoloration	0	0
Slight yellowing	2	1
Moderate yellowing	4	2
Excessive yellowing and/or any rusting	13	12

TABLE II—SCORE DEDUCTIONS FOR DEHYDRATION

Degree of dehydration of frozen product	Surface area affected (percent)		Deduction points
	Over—	Not over—	
Slight—Shallow and not color masking	0	1	0
	1	50	2
	50	100	4
Moderate—Deep but just deep enough to easily scrap off with fingernail	1	25	8
	25	50	8
	50	100	16
Excessive—Deep dehydration not easily scraped off	1	25	12
	25	100	25

§ 263.165 Size.

(a) The factor of size refers to the degree of freedom from undesirably small fillet pieces. Any fillet piece weighing less than 2 ounces is classed as being undesirably small.

(b) For the purpose of rating the factor of size the schedule of deduction-points in Table III apply. Cod fillets which receive 20 deduction points for this factor shall not be graded above Substandard regardless of the total score for the product. This is a limiting rule.

TABLE III—SCORE DEDUCTIONS FOR SIZE OF FILLET PIECES

Number of fillet pieces less than 2 ounces per pound		Deduction points
Over—	Not over—	
	0	0
0	1	1
1	2	10
2	3	15
3	4	20

§ 263.166 Workmanship defects.

(a) The factor of "workmanship defects" refers to the degree of freedom from improper packing, cutting and trimming imperfections, blemishes, and bones. Evaluation for the defect of improper packing is made on the frozen product. Evaluation of the defects of cutting and trimming, blemishes, and bones are made on the thawed product.

(1) *Improper packing.* "Improper packing" means poor arrangement of fillets, presence of voids, depressions, frost, and the imbedding of packaging material into the frozen fish flesh.

(2) *Cutting and trimming imperfections.* "Cutting and trimming imperfections" means that the fillets have ragged edges, tears, holes, or are otherwise improperly cut or trimmed.

(3) *Blemish.* "Blemish" means an instance of skin (except for skin-on fillets), scales, blood-spot, bruise, black-belly lining, fin, or extraneous material. One "instance of skin" consists of one piece of skin not less than ½ square inch and not more than 1½ square inches in area; each additional ½ square inch area of individual skin pieces greater and 1½ square inches is considered as an additional instance. One "instance of blood spot" is one of such size and prominence as to be considered objectionable. One "instance of black-belly lining" is any piece of black-belly lining not less than ½ inch and not more than 1 inch in length; each additional ½ inch length of individual pieces of black-belly lining longer than 1 inch is considered as an instance. Each aggregate area of identifiable fin or parts of any fin up to 1 square inch is considered as one "instance of fin". Each aggregate area up to 1 square inch per fillet of one scale or group of scales is considered as one "instance of scales". An "instance of bruise" consists of a bruise not less than ½ square inch and not more than 1½ square inches in area; each bruise larger than 1½ square inches is considered as two instances of bruise.

(4) *Bones.* One "instance of bone" means one bone or one group of bones occupying or contacting a circular area up to 1 square inch.

(b) For the purpose of rating the factor of "absence of defects" the schedule of deduction-points in Table IV apply.

TABLE IV—SCORE DEDUCTIONS FOR WORKMANSHIP DEFECTS

Defects subfactors	Method of determining subfactor score	Deduction points
Improper packing.	Moderate defects, noticeably affecting the product's appearance.	2
	Excessive defects, seriously affecting product's appearance.	4
Blemishes	Number of blemishes per 1 lb. of fish flesh:	
	Over 0 not over 1	1
	Over 1 not over 2	3
	Over 2 not over 3	5
	Over 3 not over 4	8
	Over 4 not over 5	12
	Over 5 not over 6	16
	Over 6 not over 7	30
	Over 7	40
Bones	Number of instances per 1 lb. of fish flesh:	
	Over 0 not over 1	0
	Over 1 not over 2	2
	Over 2 not over 3	4
	Over 3 not over 4	6
	Over 4 not over 5	8
	Over 5 not over 6	14
	Over 6 not over 7	30
	Over 7	40
Cutting and trimming.	Slight defects, scarcely noticeable.	0
	Moderate defects, noticeable but not affecting the usability of any fillets.	4
	Excessive defects impairing:	
	(a) the usability of up to ¼ of the total number of fillets.	8
	(b) the usability of over ¼ but not more than ½ of the total number of fillets.	16
	(c) the usability of over ½ of the total number of fillets.	40

§ 263.167 Character

(a) The factor of character refers to the amount of free drip in the thawed fillets, and to the tenderness and moistness of the cooked fish flesh.

(b) For the purpose of rating the factor of character, the schedule of deduction-points in Table V apply. Cod fillets which receive 15 deduction-points for the factor of character shall not be graded above Substandard regardless of the total score for the product. This is a limiting rule.

TABLE V—SCORE DEDUCTIONS FOR CHARACTER

Character subfactors	Method of determining subfactor score	Deduction points
Texture	Texture of the cooked fish:	
	(a) Firm, slightly resilient but not tough or rubbery; moist but not mushy.	0
	(b) Moderately firm; only slightly tough or rubbery; does not form a fibrous mass in the mouth; moist but not mushy.	4
	(c) Moderately tough or rubbery; has noticeable tendency to form a fibrous mass in the mouth; or is dry; or is mushy.	8
	(d) Excessively tough or rubbery; has marked tendency to form a fibrous mass in the mouth; or is very dry; or is very mushy.	15
Drip	Percent of drip:	
	Over 0 not over 5	0
	Over 5 not over 6	1
	Over 6 not over 8	2
	Over 8 not over 10	4
	Over 10 not over 12	6
	Over 12 not over 14	9
	Over 14 not over 16	12
	Over 16	15

§ 263.171 Definitions and methods of analysis.

(a) *Percent of drip.* "Percent of drip" means the percent by weight of "free drip" (the fluid which is not reabsorbed by the fish tissue when the frozen fish thaws, and which separates freely without the aid of any external forces except gravity) in an individual package as determined by the following method:

(1) *Apparatus and materials.* (i) Water bath.

(ii) Balance, accurate to 0.1 gm; or 0.01 ounce.

(iii) Pliable and impermeable bag (cryovac, pliofilm, etc.).

(iv) Corrosion resistant metal rod weight (preferably stainless steel or monel metal), measuring 3½ inches in length and approximately ¼–½ inch in diameter.

(v) U.S. Standard No. 8 mesh circular sieve (both 8 and 12 inch diameters).

(vi) Stirring motor.

(vii) Identification tags.

(2) *Procedure.* (i) Place metal rod weight into an empty pliable bag.

(ii) Weigh the bag and the metal weight.

(iii) Remove the frozen fish material from the container (container consists of the carton and the inner and outer wrapping).

(iv) Place the frozen product, plus scraps of any material remaining in the container, into the pliable bag.

(v) Weigh the bag and its contents and subtract tare (empty bag and metal

weight) to determine the net weight of the product.

(vi) Suspend the bag and contents in and agitated water bath maintained at 68° F. plus or minus 2° F. The bag should be suspended in the water so that the fish flesh is below the water line.

(vii) Allow the bag and its contents to remain immersed until the product is defrosted (a "test run", in advance, is necessary to determine time required for each product and quantity of product).[1]

(viii) Remove bag and contents from bath and gently dry outside of bag.

(ix) Weigh dry U.S. Standard No. 8 mesh circular sieve.

(x) Open bag and empty contents onto U.S. Standard No. 8 circular sieve so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for 2 minutes.

(xi) Weigh sieve and its contents and calculate drained weight. The drained weight is the weight of sieve and fillets less the weight of the dry sieve.

(xii) Calculate percent drip:

$$\frac{\text{Net weight (v)} - \text{drained weight (xi)} \times (100)}{\text{Net weight (v)}} = \text{Percent of drip}$$

(b) *Cooking in a suitable manner.* "Cooking in a suitable manner" shall mean that the product is cooked as follows: Place the thawed unseasoned product into a boilable film-type pouch; fold the open end of the pouch over the suspension bar and clamp in place to provide a loose seal. Immerse the pouch and its contents in boiling water and cook until the internal temperature of the fillets reaches 160° F. (about 20 minutes).

§ 263.175 Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified in accordance with Part 260 Subpart A of this chapter. (Regulations Governing Processed Fishery Products.)

SCORE SHEET

§ 263.181 Score sheet for cod fillets.

Label: _____
Size and kind of container: _____
Container mark or identification: _____
Size of lot: _____
Number of packages per master carton: _____
Size of sample: _____
Type of overwrap: _____
Actual net weight: _____ (lb.) _____ (kg.)

Factor	Score points	Sample score
Appearance	15	
Size	20	
Absence of defects	40	
Character	15	
Total	100	

Flavor and odor: _____
Final grade: _____

[1] The purpose of the "test run" is to determine the time necessary to thaw the product. The complete thawing of the product is determined by frequent but gentle squeezing of the bag until no hard core or ice crystals are felt. This package which has been squeezed cannot be used for drained weight calculations.

Subpart C—United States Standards for Grades of Flounder and Sole Fillets

§ 263.201 Description of the product.

Frozen flounder and sole fillets consist of clean, wholesome fillets processed and frozen in accordance with good commercial practice and maintained at temperatures necessary for their preservation. The fillets may be cut transversely or longitudinally into subunits.

NOTE: This standard does not provide for the grading of units of fish flesh cut from previously frozen fish blocks, slabs, or similar material.

The product covered by this standard is prepared from the following species only:

SOLE

Dover sole (Microstomus pacificus).
English sole (Parophrys vetulus).
Gray sole (Glyptocephalus cynoglossus).
Petrale sole (Eopsetta jordani).
Lemon sole (Pseudopleuronectes americanus, over 3½ pounds).
Rock sole (Lepidopsetta bilineata).
Sand sole (Psettichthys melanostictus).

FLOUNDER

Blackback (Pseudopleuronectes americanus, less than 3½ pounds).
Yellowtail flounder (Limanda ferruginea).
Dab, plaice (Hippoglossoides platessoides).
Fluke (Paralichthys dentatus).
Starry flounder (Platichthys stellatus).

§ 263.202 Product forms.

(a) Types:
(1) Fresh,
(2) Frozen solid packs; glazed or unglazed,
(3) Frozen individually; glazed or unglazed.
(b) Styles:
(1) Skin on,
(2) Skin on, white side only,
(3) Skinless.

§ 263.203 Grades of frozen flounder and sole fillets.

(a) "U.S. Grade A" is the quality of frozen flounder or sole fillets for which the total score is not less than 85 points, when the fillets are rated in accordance with the scoring system outlined in the following sections.

(b) "U.S. Grade B" is the quality of frozen flounder or sole fillets for which the total score is less than 85 ponts but is not less than 70 points, when the fillets are rated in accordance with the scoring system outlined in the following sections.

(c) "Substandard" is the quality of frozen flounder or sole fillets that fail to meet the requirements of the U.S. Grade B.

§ 263.211 Determination of the grade.

The grade is determined by observing the product in the frozen, thawed, and cooked states and is evaluated by numerical scoring. Points are deducted for variations of quality for each factor in accordance with the schedule in Table 1. The total of the points deducted is subtracted from 100 to obtain the score. The maximum score is 100; the minimum score is 0.

TABLE 1—SCHEDULE OF POINT DEDUCTIONS PER POUND OF FLOUNDER OR SOLE FILLETS AND GRADING SCORE SHEET

	Scored factors	Description of quality variation		Deduct	Deductions
Frozen	1. Appearance	Adversely affected by imbedded packaging material, voids, depressions, surface irregularity, and poor arrangements of fillets:	Slight	2	
			Moderate	4	
			Excessive	10	
	2. Dehydration	For each inch square (determined by grid) of affected area:	Color masking, easily scraped off	½	
			Deep, not easily scraped off	1	
Thawed	3. Weights	(a) For each fillet or piece less than 1 oz., except first fillet or piece		5	
		(b) For sole only: For each fillet from 1–2 oz., except first fillet		2	
		For flounder only. For each fillet from 1–2 oz., except first three fillets		2	
	4. Workmanship defects	For each inch square (determined by grid) of affected area:	(a) Cutting and trimming (ragged edges holes, tears, improper or unnecessary cuts and lace)	½	
			(b) Blemishes (belly lining, blood spots, bruises, extraneous material, fins, discolored pugh marks, scales and skin)	2	
			(c) Bones normally removed)	3	
	5. Color	(a) Deteriorative discoloration (yellowing of fatty portion and/or darkening of light portion)	Slight	2	
			Moderate	5	
			Excessive	15	
		(b) Nonuniformity of color (natural color differences within package due to packing fish of contrasting color)	Moderate	3	
			Excessive	5	
	6. Abnormal condition	Usability and/or desirability of fillets impaired by abnormal conditions (jellied, milky, chalky)	Moderate	16	
			Excessive	31	
Cooked	7. Texture	Tough, dry, fibrous, or watery for species involved	Slight	4	
			Moderate	8	
			Excessive	15	
	8. Odor and flavor	Very good: Full typical odor and flavor of fresh fish			
		Good: Noticeable decrease in typical odor and flavor of fresh fish		6	
		Reasonably good: Lacking typical odor and flavor of fresh fish, but not objectionable		16	
		Substandard: Objectionable odor and/or flavor		31	
Total deductions					
Score (100 minus total deductions)					
Grade (100 to 85=Grade A; 84 to 70=Grade B; 69 and below=Substandard)					

Label
Size of lot
Size of sample
Number of packages per master carton
Remarks

Actual net weight ..... lb ..... oz
Size and kind of container
Container mark or identification
Type of overwrap

§ 263.221 Definitions.

(a) "Slight" refers to a condition that is scarcely noticeable but that does affect the appearance, desirability, and/or eating quality of the fillets.

(b) "Moderate" refers to a condition that is conspicuously noticeable but that does not seriously affect the appearance, desirability, and/or eating quality of the fillets.

(c) "Excessive" refers to a condition that is conspicuously noticeable and that does seriously affect the appearance, desirability and/or eating quality of the fillets.

(d) "Bones normally removed" refers to (1) nape membrane bones (adjacent to visceral cavity) and to (2) radial bones (adjacent to fins and lace area).

(e) "Determined by grid" means that a transparent grid of 1-inch squares is placed over the defect area, and points are deducted (as specified in Table 1) for each square of affected area under the grid, each square being counted as one whether it is full or fractional.

(f) "Thawed state" means that the frozen product has been placed within a film-type pouch and warmed to an internal temperature of about 32° F by immersing the pouch in running tap water of about 50° to 70° F. Thawing time usually takes 25 to 45 minutes for a 1-pound package.

(g) "Cooked state" means that the thawed, unseasoned product has been placed within a boilable film-type pouch and heated to an internal temperature of about 160° F by immersing the pouch in boiling water. Cooking time usually ranges from 3 to 5 minutes for single fillets and from 7 to 10 minutes for 1-pound packages of fillets.

(h) "Actual net weight" means the weight of the fish flesh within the package after all packaging material, ice glaze, or other protective coating have been removed. ("Actual net weight" of frozen glazed fillets is determined as follows: (1) Rapidly remove excessive ice layers or pockets with running tap water or nozzle-type water spray. (2) Rapidly thaw remaining surfaces of frozen fish sufficiently with tap water or spray to prevent refreezing free surface water. (3) Gently wipe off all free water with a moisture-saturated paper towel. (4) Weigh the fish to obtain "actual net weight").

(i) "Abnormal condition" means that the normal physical and/or chemical structure of the fish flesh has been sufficiently altered so that the usability and/or desirability of the fillet is adversely affected. It includes, but is not limited to, the following examples:

(1) "Jellied" refers to the abnormal condition wherein a fillet is partly or wholly characterized by a gelatinous glossy, translucent appearance, feels slimy to the touch, and retains its gelatinous, slimy properties in the cooked state.

(2) "Milky" refers to the abnormal condition wherein a fillet is partly or wholly characterized by a milky-white, excessively mushy, pasty, or fluidized appearance.

(3) "Chalky" refers to the abnormal condition wherein a fillet is partly or wholly characterized by a dry, chalky, granular appearance and fiberless structure.

(j) "Odor and flavor" is classified as follows:

(1) "Very good": Fish in this category have essentially the full, good, typical odor, and flavor of the indicated species.

(2) "Good": Fish in this category show a noticeable decrease of the good, typical odor and flavor of the indicated species, and/or may have certain less acceptable natural environmental odors and flavors of slight intensity (iodoform-type, phenolic-type, feed-type, etc.), but may have no off odors and flavors.

(3) "Reasonably good": Fish in this category may be flat, or completely lacking in the good, typical odor and flavor of the indicated species, and/or may have certain less acceptable natural environmental odors and flavors of moderate intensity (iodoform-type, phenolic-type, feed-type, etc.), but may have no objectionable odors and flavors.

(4) "Substandard": Fish in this category have odors and flavors that are objectionable.

§ 263.225 Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified in accordance with Part 260, Subpart A of this chapter, (Regulations Governing Processed Fishery Products.)

Subpart D—United States Standards for Grades of Haddock Fillets

§ 263.251 Product description.

The product described in this part consists of clean, whole, wholesome fillets or primarily large pieces of clean, whole, wholesome fillets, cut away from either side of haddock, Melanogrammus aeglefinus; the fillets may be either skinless or with skin on. They are packaged in accordance with good commercial practice and are maintained at temperatures necessary for the preservation of the product. (This part does not provide for the grading of pieces of fish flesh cut away from previously frozen fish blocks, slabs, or similar products.)

§ 263.252 Grades of frozen haddock fillets.

(a) "U.S. Grade A" is the quality of haddock fillets that possess a good flavor and odor; and for those factors which are rated in accordance with the scoring system outlined in this part have a total score of 85 to 100 points.

(b) "U.S. Grade B" is the quality of haddock fillets that possess at least a reasonably good flavor and odor; and for those factors which are rated in accordance with the scoring system outlined in this part have a total score of not less than 70 points: *Provided*, That no factor receives maximum point score deduction.

(c) "Substandard" is the quality of haddock fillets that fail to meet the requirements of U.S. Grade B.

§ 263.254 Product forms.

(a) Types:

(1) Fresh,

(2) Frozen, solid pack; glazed and unglazed.

(3) Frozen individually; glazed or unglazed.

(b) Styles:

(1) Skin on,

(2) Skinless.

§ 263.256 Recommended weights and dimensions.

(a) The recommendations as to net weights and dimensions of packaged haddock fillets are not incorporated in the grades of the finished product since net weights and dimensions, as such, are not factors of quality for the purpose of these grades.

(b) It is recommended that the net weights of the packaged haddock fillets be not less than 12 ounces and not over 10 pounds.

§ 263.261 Ascertaining the grade.

The grade of haddock fillets is ascertained by observing the product in the frozen and thawed states and after representative sample units have been cooked in a suitable manner. The following factors are evaluated in ascertaining the grade of the product: Flavor, odor, appearance, size, defects, and character.

(a) These factors are rated in the following manner:

(1) *Flavor and odor.* These factors are rated by organolepic examination. Score points are not assessed (see § 263.262).

(2) *Appearance, size, defects, and character.* These factors are rated by score points expressed numerically on the scale of 100.

(b) The four factors and the maximum number of points that may be given each are as follows:

Factors:	*Points*
Appearance	25
Size	20
Defects	40
Character	51
Total score	100

§ 263.262 Evaluation of the unscored factor of flavor and odor.

(a) *Good flavor and odor.* "Good flavor and odor" (essential requirement for a Grade A product) means that the fish flesh has good flavor and odor characteristic of haddock (Melanogrammus aeglefinus); and is free from staleness, and off-flavors and off-odors of any kind.

(b) *Reasonably good flavor and odor.* "Reasonably good flavor and odor" (minimum requirement of a Grade B product) means that the fish flesh may be somewhat lacking in good flavor and odor; and is free from objectionable off-flavors and off-odors of any kind.

§ 263.263 Ascertaining the rating for the factors which are scored; appearance, size, workmanship defects, and character.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. Point deductions are allotted for each degree or amount of variation within each factor. The value for each factor is the maximum points allotted for the factor less the sum of the deduction-points within the factor.

§ 263.264 Appearance.

(a) General: The factor of appearance refers to the color of the fish flesh, and to the degree of surface dehydration of the product.

(b) For the purpose of rating the factor of appearance the schedule of deduction-points in Tables I and II apply. Haddock fillets which receive 25 deduction-points for this factor shall not be graded above Substandard regardless of the total score for the product. This is a limiting rule.

TABLE I—SCORE DEDUCTIONS FOR COLOR SUBFACTOR

Color	Deduction points	
	"Light"-colored portion comprising main portion of fillet	"Dark" colored portion occurring under skin mainly along lateral line
No discoloration	0	0
Slight yellowing	2	1
Moderate yellowing	4	2
Excessive yellowing and/or any rusting	13	12

TABLE II—SCORE DEDUCTIONS FOR DEHYDRATION SUBFACTOR

Degree of dehydration	Surface area affected (percent)		Deduction points
	Over—	Not over—	
Slight—Shallow and not color masking	0	1	0
	1	25	2
	25	100	5
Moderate—Deep but just deep enough to easily scrape off with fingernail	1	25	5
	25	50	8
	50	100	16
Excessive—Deep dehydration not easily scraped off	1	25	12
	25	100	25

§ 263.265 Size.

(a) General: The factor of size refers to the degree of freedom from undesirably small fillet pieces. Any piece weighing less than 2 ounces is classed undesirably small.

(b) For the purpose of rating the factor of size the schedule of deduction-points in Table III apply. Haddock fillets which receive 20 deduction points for this factor shall not be graded above Substandard regardless of the total score for the product. This is a limiting rule.

TABLE III—SCORE DEDUCTIONS FOR SIZE OF FILLET PIECES

Number of fillet pieces less than 2 ounces per pound		Deduction points
Over—	Not over—	
	0	0
0	1	1
1	2	10
2	3	15
3	4	20

§ 263.266 Workmanship defects.

(a) General: The factor of workmanship defects refers to the degree of freedom from improper packing, cutting and trimming imperfections, blemishes, and bones.

(1) *Improper packing.* "Improper packing" means poor arrangement of fillets, presence of voids, depressions, frost, and the imbedding of packaging material into fish flesh.

(2) *Cutting and trimming imperfections.* "Cutting and trimming imperfections" means that the fillets have ragged edges, tears, holes, or are otherwise improperly cut or trimmed.

(3) *Blemish.* "Blemish" means a piece of skin (except for skin-on fillets), scales, blood spot, a bruise, a black belly lining, a fin, or extraneous material. One "piece of skin" consists of one piece at least ½ square inch in area; except that any skin patches larger than 1½ square inches are each considered as two pieces of skin. "Blood spot" is one of such size and prominence as to be considered objectionable. "Black belly lining" is any piece longer than ½ inch. Each aggregate area up to 1 square inch of identifiable fin or parts of any fin is considered as one "instance of fin". Each aggregate area up to 1 square inch per fillet of one scale or group of scales is considered one "instance of scales". "A bruise" consists of an affected area of ½ square inch or more in area; except that any bruise larger than 1½ square inches is considered as two bruises.

(4) *Bones.* "Bones" means any bones that can be identified, and are objectionable. One instance of bone means one bone or one group of bones occupying or contacting a circular area of 1 square inch.

(b) For the purpose of rating the factor of freedom from defects, the schedule of deduction-points in Table IV apply.

TABLE IV—SCORE DEDUCTIONS FOR WORKMANSHIP DEFECTS

Defects subfactors	Method of determining subfactor score	Deduction points
Improper packing.	Moderate defects, noticeably affecting the products appearance.	2
	Excessive defects, seriously affecting products appearance.	4
Blemishes	Number of blemishes per 1 lb. of fish flesh:	
	Over 0 not over 1	1
	Over 1 not over 2	3
	Over 2 not over 3	5
	Over 3 not over 4	8
	Over 4 not over 5	16
	Over 5 not over 6	30
	Over 6	40
Bones	Number of instances per 1 lb. of fish flesh:	
	Over 0 not over 1	0
	Over 1 not over 2	5
	Over 2 not over 3	10
	Over 3 not over 4	15
	Over 4 not over 5	30
	Over 5	40
Cutting and trimming.	Slight defects, scarcely noticeable.	0
	Moderate defects, noticeable but not affecting the useability of any fillets.	4
	Excessive defects impairing:	
	(a) the useability of up to ¼ of the total number of fillets.	8
	(b) the useability of over ¼ but not more than ½ of the total number of fillets.	16
	(c) the useability of over ½ of the total number of fillets.	40

§ 263.267 Character.

(a) General: The factor of character refers to the amount of drip in the thawed fillets, and to the tenderness and moistness of the properly cooked fish flesh.

(b) For the purpose of rating the factor of character, the schedule of deduction-points in Table V apply. Haddock fillets which receive 15 deduction points for this factor shall not be graded above Substandard regardless of the total score for the product. This is a limiting rule.

TABLE V—SCORE DEDUCTIONS FOR CHARACTER

Character subfactors	Method of determining subfactor score	Deduction points
Texture	Texture of the cooked fish:	
	(a) Firm, slightly resilient but not tough or rubbery; moist but not mushy.	0
	(b) Moderately firm; only slightly tough or rubbery; does not form a fibrous mass in the mouth; moist but not mushy.	4
	(c) Moderately tough or rubbery; has noticeable tendency to form a fibrous mass in the mouth; or is dry; or is mushy.	8
	(d) Excessively tough or rubbery; has marked tendency to form a fibrous mass in the mouth; or is very dry; or is very mushy.	15
Amount of drip.	Percent of drip:	
	Over 0 not over 5	0
	Over 5 not over 6	1
	Over 6 not over 8	2
	Over 8 not over 10	4
	Over 10 not over 12	6
	Over 12 not over 14	9
	Over 14 not over 16	12
	Over 16	15

§ 263.271 Definitions and methods of analysis.

(a) *Percent of drip.* "Percent of drip" means the percent by weight of "free drip" (the fluid which is not reabsorbed by the fish tissue when the frozen fish thaws, and which separates freely without the aid of any external forces except gravity) in an individual package as determined by the following method:

(1) *Apparatus and materials.* (i) Water bath.

(ii) Balance, accurate to 0.1 gm; or 0.01 ounce.

(iii) Pliable and impermeable bag (cryovac, pliofilm, etc.).

(iv) Vacuum source (Vacuum pump or water aspirator).

(v) U.S. Standard No. 8 mesh circular sieve (both 8 and 12 inch diameters).

(vi) Stirring motor.

(vii) Identification tags.

(2) *Procedure.* (i) Weigh pliable and impermeable bag (cryovac, pliofilm, etc.).

(ii) Remove frozen material from container (container consists of the carton and the inner and outer wrappings).

(iii) Place frozen product, plus scraps of any material remaining on the container, into the pliable bag.

(iv) Weight bag and contents and subtract tare to determine the net weight of the product.

(v) Evacuate air from bag by use of suction so that bag closely fits contour of product, with no air pockets.

(vi) Crimp the open end of bag and tie off (a secure and leakproof closure may be created by tying close to product and then folding excess bag and tying again).

(vii) Competely immerse bag and contents in a circulated water bath maintained at 68° F. plus or minus 2° F.

(viii) Allow to remain immersed until the product is defrosted (a "test run", in advance, is necessary to determine time required for each product and quantity of product).[1]

(ix) Remove bag and contents from bath and gently dry outside of bag.

(x) Weigh dry U.S. Standard No. 8 mesh circular sieve.

(xi) Open bag and empty contents onto U.S. Standard No. 8 circular sieve so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for two minutes.

(xii) Weigh sieve and its contents and calculate drained weight. The drained weight is the weight of sieve and fillets less the weight of the dry sieve.

(xiii) Calculate percent drip:

$$\frac{\text{Net weight (iv)–drained weight (xii)} \times (100)}{\text{Net weight}} = \text{Percent of drip}$$

(b) *Cooking in a suitable manner.* "Cooking in a suitable manner" shall mean that the product is cooked as follows: Place the thawed unseasoned product into a boilable film-type pouch. The pouch and its contents are then immersed in boiling water and cooked until the internal temperature of the fillets reaches 160° F. (about 20 minutes).

§ 263.275 Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified in accordance with Part 260 Subpart A of this chapter. (Regulations Governing Processed Fishery Products.)

§ 263.281 Score sheet for haddock fillets.

Label: .....
Size and kind of container: .....
Container mark or identification: .....
Size of lot: .....
Number of packages per master carton: .....
Size of sample: .....
Type of overwrap: .....
Actual net weight: .....(lb.).....(kg.)

Factor	Score points	Sample score
Appearance	25	
Uniformity	20	
Defects	40	
Character	15	
Total	100	

Flavor and odor .....
Final grade .....

Subpart E—United States Standards for Grades of Ocean-Perch Fillets and Pacific Ocean-Perch Fillets

§ 263.301 Product description.

The product described in this part consists of: (a) Clean, whole, wholesome fillets, cut away from either side of the ocean perch, Sebastes marinus, which are packaged in accordance with good commercial practice and are maintained at temperatures necessary for the preservation of the product; or (b) clean, whole, wholesome fillets, cut away from either side of the Pacific ocean perch, Sebastodes alutus, which are packaged in accordance with good commercial practice and are maintained at temperatures necessary for the preservation of the product.

§ 263.302 Grades of ocean-perch fillets.

(a) "U.S. Grade A" is the quality of ocean-perch fillets that possess good flavor and odor; and for those factors of quality which are rated in accordance with the scoring system outlined in this part the total score is not less than 85 points.

(b) "U.S. Grade B" is the quality of ocean-perch fillets that possess at least reasonably good flavor and odor; and for those factors of quality which are rated in accordance with the scoring system

[1] The purpose of the "test run" is to determine the time necessary to thaw the product. The complete thawing of the product is determined by frequent but gentle squeezing of the bag until no hard core or ice crystals are felt. This package which has been squeezed can not be used for drained weight calculations.

outlined in this part the total score is not less than 70 points.

(c) "Substandard" is the quality of ocean-perch fillets that fail to meet the requirements of U.S. Grade B.

§ 263.304 Product forms.

(a) Types:
(1) Fresh.
(2) Frozen, solid pack; glazed and unglazed.
(3) Frozen individually; glazed or unglazed.
(b) Styles:
(1) Skin on.
(2) Skinless.

§ 263.306 Recommended weights and dimensions.

(a) The net weights and dimensions of packaged ocean-perch fillets and Pacific ocean-perch fillets are not incorporated in the grades of the finished product since net weights and dimensions, as such, are not factors of quality for the purpose of these grades.

(b) It is recommended that the net weight of the packaged ocean-perch fillets and Pacific ocean-perch fillets be not less than 12 ounces and not over 10 pounds and that the product be classified as large, medium, or small as classified by common commercial size classification practices.

§ 263.311 Ascertaining the grade.

The grade of ocean-perch fillets is ascertained by examining the product in the frozen, thawed, and cooked states. The following factors of quality are evaluated in ascertaining the grade of the product: Flavor and odor, appearance, size, workmanship defects, and character.

These factors are rated in the following manner:

(1) *Flavor and odor.* This factor is rated directly by organoleptic evaluation. Score points are not assessed (see § 263.312.

(2) *Appearance, size, workmanship defects, and character.* The relative importance of these factors is expressed numerically on the scale of 100. The maximum number of points that may be given each of these factors are:

Factors:	Points
Appearance	15
Size	20
Absence of defects	50
Character	15
Total possible score	100

§ 263.312 Evaluation of the unscored factor of flavor and odor.

(a) *Good flavor and odor.* "Good flavor and odor" (essential requirement for a Grade A product) means that the fish flesh has good flavor and odor characteristic of the species (either Sebastes marinus or Sebastodes alutus) and is free from staleness, and off-flavors and off-odors of any kind.

(b) *Reasonably good flavor and odor.* "Reasonably good flavor and odor" (minimum requirement for a Grade B product) means that the fish flesh may be somewhat lacking in good flavor and odor; and is free from objectionable off-flavors and off-odors of any kind.

§ 263.313 Evaluation and rating of the scored factors; appearance, size, absence of defect, and character.

The essential variations in quality within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. Point deductions are allotted for each degree or amount of variation within each factor. The net score for each factor is the maximum points for that factor less the sum of the deduction-points within the factor. The total score for the product is the sum of the net scores for the four scored factors.

§ 263.314 Appearance.

(a) The factor of appearance refers to the color of the fish flesh, and to the degree and amount of surface dehydration of the frozen product.

(b) For the purpose of rating the factor of appearance the schedule of deduction-points in Table I apply. Frozen ocean-perch fillets which receive 15 deduction points for the factor of appearance shall not be graded above Substandard regardless of the total score for the product. This is a limiting rule.

TABLE I—SCORED DEDUCTIONS FOR APPEARANCE

Color of product			Deduction points
No discoloration			0
Slight yellowing			4
Moderate yellowing			9
Excessive yellowing and/or rusting			15
Degree of dehydration of frozen product	Surfaces area affected (percent)		
	Over—	Not over—	
Slight—Shallow and not color masking	0	1	0
	1	50	2
	50	100	5
Moderate—Deep, but just deep enough to easily scrape with fingernail	0	25	5
	25	50	10
	50	100	15
Excessive—Deep dehydration not easily scraped off	0	10	10
	5	15	15

§ 263.315 Size.

(a) The factor of size refers to the degree of freedom from undesirably small fillets.

(b) For the purpose of rating the factor of size, the schedule of deduction-points in Table II apply. Ocean-perch fillets which receive 20 deduction-points for this factor shall not be graded above Substandard regardless of the total score for the product. This is a limiting rule.

TABLE II—SCORE DEDUCTIONS FOR SIZE OF FILLETS

Number of fillets per pound	Number of small fillets or pieces of fillets											
	0	1	2	3	4	5	6	7	8	9	10	11
	Deduction points	Deduction points	Deduction points	Deduction points	Deduction points	Deduction points	Deduction points	Deduction points	Deduction points	Deduction points	Deduction points	Deduction points
	Under two ounces in weight											
2	0	5										
3	0	5	10									
4	0	4	7	10								
5	0	4	7	10	15							
6	0	3	6	9	15	20						
	Under one ounce in weight											
7	0	5	10	15	20	20	20					
8	0	5	10	15	20	20	20	20				
9	0	0	5	10	15	20	20	20	20			
10	0	0	5	10	15	20	20	20	20	20		
11	0	0	4	10	15	20	20	20	20	20	20	
12	0	0	4	7	10	15	15	20	20	20	20	20
13	0	0	0	4	7	10	15	15	15	20	20	20
14	5	0	0	1	4	7	10	15	15	15	20	20
15 or more	0	0	0	0	1	4	7	10	15	15	15	20

§ 263.316 Workmanship defects.

(a) The factor of "workmanship defects" refers to the degree of freedom from improper packing, cutting and trimming imperfections, blemishes, and bones. Evaluation for the defect of improper packing is made on the frozen product. Evaluation of the defects of cutting and trimming, blemishes, and bones are made on the thawed product.

(1) *Improper packing.* "Improper packing" means poor arrangement of fillets, presence of voids, depressions, frost, and the imbedding of packaging material into the frozen fish flesh.

(2) *Cutting and trimming imperfections.* "Cutting and trimming imper-

fections" means that the fillets have ragged edges, tears, holes, or are otherwise improperly cut or trimmed.

(3) *Blemish.* "Blemish" means an instance of blood-spot, bruise, black-belly lining or membrane, fin, scales, or extraneous material. Blemish also means an instance of skin on skinned fillets. One "instance of blood spot" is one of such size and prominence as to be considered objectionable. An "instance of bruise" consists of a bruise not less than ½ square inch and not more than 1½ square inches in area; each bruise larger than 1½ square inches is considered as two instances of bruise. An "instance of black-belly lining or membrane" is any piece of black-belly lining or membrane not less than ½ inch and not more than 1 inch in length; each additional ½ inch length of individual pieces of black-belly lining or membrane longer than 1 inch is considered as an instance. Each aggregate area of identifiable fin or parts of any fin up to 1 square inch is considered as one "instance of fin". One "instance of scales" is an aggregate area of scales greater than ½ square inch per fillet. One "instance of skin" consists of one piece of skin at least ½ square inch in area; except that any skin patches larger than 1½ square inches are considered as two instances of skin.

(4) *Bones.* One "instance of bones" means an objectionable bone or group of bones occupying or contacting a circular area up to 1 square inch. An objectionable bone is any bone of such size and rigidity as to remain objectionable after cooking. Bones which will soften or disintegrate after cooking are not considered objectionable.

(b) For the purpose of rating the factor of absence of defects the schedule of deduction-points in Table III applies.

TABLE III—SCORE DEDUCTIONS FOR WORKMANSHIP DEFECTS

Subfactors	Method of determining subfactor score	Deduction points
Improper packing.	Slight defects, not noticeably affecting the product's appearance.	0
	Moderate defects, noticeably affecting the product's appearance.	2
	Excessive defects, seriously affecting product's appearance.	4
Blemishes.	Number of blemishes per 1 lb. of product when there are 6 or less fillets per lb.:	
	Over 0 not over 2	0
	Over 2 not over 4	2
	Over 4 not over 5	4
	Over 5 not over 6	7
	Over 6 not over 7	10
	Over 7 not over 8	15
	Over 8 not over 9	20
	Over 9 not over 10	30
	Over 10 not over 11	40
	Over 11	60
	Number of blemishes per 1 lb. of product when there are 7 to 12 (inclusive) fillets per lb.:	
	Over 0 not over 3	0
	Over 3 not over 5	2
	Over 5 not over 6	4
	Over 6 not over 7	7
	Over 7 not over 8	10
	Over 8 not over 9	15
	Over 9 not over 10	20
	Over 10 not over 11	30
	Over 11 not over 12	40
	Over 12	60
	Number of blemishes per 1 lb. of product when there are 13 or more fillets per lb.:	

TABLE III—SCORE DEDUCTIONS FOR ABSENCE OF DEFECTS—Continued

Subfactors	Method of determining subfactor score	Deduction points
	Over 0 not over 6	0
	Over 6 not over 8	2
	Over 8 not over 9	4
	Over 9 not over 10	7
	Over 10 not over 11	10
	Over 11 not over 12	15
	Over 12 not over 13	20
	Over 13 not over 14	30
	Over 14 not over 15	40
	Over 15	60
Bones	Number of instances per lb. of product when there are 6 or less fillets per lb.:	
	Over 0 not over 4	0
	Over 4 not over 5	1
	Over 5 not over 6	2
	Over 6 not over 7	5
	Over 7 not over 8	12
	Over 8 not over 9	20
	Over 9 not over 10	35
	Over 10	60
	Number of instances per lb. of product when there are 7 or more fillets per lb.:	
	Over 0 not over 3	0
	Over 3 not over 4	1
	Over 4 not over 5	2
	Over 5 not over 6	5
	Over 6 not over 7	12
	Over 7 not over 8	20
	Over 8 not over 9	35
	Over 9	60
Cutting and trimming.	Slight defects, scarcely noticeable	0
	Moderate defects, noticeable but not affecting the usability of any fillets.	4
	Excessive defects impairing:	
	(a) The usability of up to ¼ of the total number of fillets.	8
	(b) The usability of over ¼ but not more than ½ of the total number of fillets.	16
	(c) The usability of over ½ of the total number of fillets.	40

§ 263.317 Character.

(a) General: The factor of character refers to the tenderness and moistness of the cooked fish flesh.

(b) For the purpose of rating the factor of character, the schedule of deduction-points in Table IV apply. Ocean-perch fillets which receive 15 deduction-points for the factor of character shall not be graded above Substandard regardless of the total score for the product. This is a limiting rule.

TABLE IV—SCORE DEDUCTIONS FOR CHARACTER

Texture of the cooked fish	Point deductions
1. Texture:	
(a) Firm, but tender and moist	0
(b) Slightly tough, dry, and/or fibrous, or mushy	4
(c) Moderately tough, rubbery, and/or fibrous	8
(d) Excessively tough, rubbery, and/or fibrous	15

§ 263.321 Cooking in a suitable manner.

"Cooking in a suitable manner" shall mean that the product is cooked as follows: Place the thawed unseasoned product into a boilable film-type pouch. Fold the pouch over a suspension bar and clamp it in place so that a loose seal is maintained. Immerse the pouch and its contents in boiling water and cook until the internal temperature of the fillets reaches 160° F. (about 20 minutes).

§ 263.325 Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified in accordance with Part 260 Subpart A of this chapter (Regulations Governing Processed Fishery Products).

§ 263.331 Score sheet for ocean-perch fillets.

Label.....
Size and kind of container.....
Container mark or identification.....
Size of lot.....
Number of packages per master carton.....
Size of sample.....
Type of overwrap.....
Actual net weight.....(lb.).....(kg.)

Factor	Score points	Sample score
Appearance	15	
Size	20	
Absence of defects	50	
Character	15	
Total	100	

Flavor and odor.....
Final grade.....

PART 264—UNITED STATES STANDARDS FOR GRADES OF FROZEN FISH BLOCKS AND PRODUCTS MADE THEREFROM

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AUTHORITY: 7 U.S.C. 1621–1630.

Subpart A—United States Standards for Frozen Fish Blocks

§ 264.101 Description of the product.

Frozen fish blocks are rectangular-shaped masses of cohering frozen fish flesh of a single species. They consist of adequately drained whole, wholesome fillets or pieces of whole, wholesome fillets cut into small portions but not ground or comminuted; and they are frozen and maintained at temperatures necessary for the preservation of the product. Frozen fish blocks are made in two styles.

(a) *Style I—skinless fish blocks.* Fish blocks that have been made from skinless fillets.

(b) *Style II—skin-on fish blocks.* Fish blocks that have been made from demonstrably acceptable skin-on fillets.

§ 264.102 Grades.

(a) "U.S. Grade A" is the quality of frozen fish blocks that (1) possess a good flavor and odor and that (2) have a total score of 85 to 100 points for those factors that are rated in accordance with the scoring system outlined in this part.

(b) "U.S. Grade B" is the quality of frozen fish blocks that (1) possess at least a reasonably good flavor and odor and that (2) have a total score of 70 to 84 points for those factors that are rated in accordance with the scoring system in this part.

(c) "Substandard" is the quality of frozen fish blocks that meet product description but fail to meet the requirements of U.S. Grade B.

§ 264.111 Determination of the grade.

The grade is determined by examining the product in the frozen, thawed, and cooked states and is evaluated by considering the following factors:

(a) *Factors rated by score points.* Points are deducted for variation in the quality of each factor in accordance with the schedule in table 1. The total of points deducted is subtracted from 100 to obtain the score. The maximum score is 100; the minimum score is 0.

(b) *Factors not rated by score points.* The factor of "flavor and odor" is evaluated organoleptically by smelling and tasting the product after it has been cooked in accordance with § 264.121(c).

(1) Good flavor and odor (essential requirements for a Grade A product) means that the cooked product has the typical flavor and odor of the indicated species of fish and is free from rancidity, bitterness, staleness, and off-flavors and off-odors of any kind.

(2) Reasonably good flavor and odor (minimum requirements of a Grade B product) means that the cooked product is lacking in good flavor and odor but is free from objectionable off-flavors and off-odors of any kind.

TABLE 1—SCHEDULE OF POINT DEDUCTIONS PER SAMPLE UNIT

State	No.	Factors scored	Aspects determining score	Deduct
Frozen	1	Color	Small degree: Moderate yellowing Large degree: Excessive yellowing and/or rusting	4 16
	2	Dehydration	Minor: Moderate dehydration for each 10 percent of surface area affected. Major: Excessive dehydration for each 10 percent of surface area affected.	3 8
	3	Uniformity of size	Minor: Each deviation from declared size in length, width, or thickness ±⅛ to ¼ inch. Major: Each deviation from declared size in length, width, or thickness over ±¼ inch.	2 6
	4	Uniformity of weight	Minor: Any minus deviation from declared weight of more than 1 ounce but not more than 4 ounces. Major: Any minus deviation from declared weight more than 4 ounces.	1 5
	5	Angles	Edge angle—2 out of 3 readings deviating ⅛ inch Corner angle—each angle deviating ⅛ inch.	2
	6	Improper fill	For each 1 ounce unit cut from the block that would be adversely affected due to air spaces, ice spaces, depressions, ragged edges, damage, or imbedded packaging material.	1
Thawed	7	Blemishes	Each blemish in 5 pounds of fish block	2
	8	Bones	Each instance of bones in 5 pounds of fish block	5
Cooked	9	Texture	Small degree: Moderately tough, dry, rubbery, or mushy Large degree: Excessively tough, dry, rubbery, or mushy	5 11

§ 264.121 Definitions.

(a) *Examination of sample, frozen state.* (1) Color refers to reasonably uniform color characteristics of the species used. Deviations from normal color include noticeable yellowing and/or rusting of the fish surface.

(2) Dehydration refers to loss of moisture from the fish surfaces during frozen storage. Moderate dehydration is color-masking and can easily be scraped off with a fingernail. Excessive dehydration is deep color-masking and requires a knife or other hard instrument to scrape it off.

(3) Uniformity of size refers to the degree of conformity to the declared size. A deviation is considered to be any deviation from stated length, width, or thickness, or from the average dimensions if no dimensions are stated. Only one deviation from each dimension may be assessed. Two readings for length, three readings for width, and four readings for thickness will be measured.

(4) Uniformity of weight refers to the degree of conformity to the weight. Only underweight deviations are assessed.

(5) An acceptable edge angle is an angle formed by two adjoining surfaces whose apex is within ⅜ inch of a carpenter's square placed along the surfaces. For each edge angle, three readings will be made and at least two readings must be acceptable for the whole edge angle to be acceptable. An acceptable corner angle is an angle formed by 3 adjoining surfaces whose apex is within ⅜ inch of the apex of a carpenter's square placed on the edge surfaces. Unacceptable angles fail to meet these criteria.

(6) Improper fill refers to surface and internal air or ice voids, ragged edges, or damage. It is measured as the number of 1-ounce units that would be adversely affected when the block is cut. For this purpose, the 1-ounce unit is considered to be 4 x 1 x ⅝ inch.

(b) *Examination of the product, thawed state.* (1) Blemishes refer to a piece of skin, scale, a blood spot, a fin, a bruise, a black belly lining, a piece of nape membrane or a harmless piece of extraneous material. One "piece of skin" consists of one piece ½ square inch in area; except that for skin patches larger than 1 square inch, an additional instance shall be assessed for each additional ½ square inch in area. "Blood spot" is one of such size and degree as to be considered objectionable. A "piece of black belly lining" is any piece longer than ½ inch. "Fin" is one fin or one identifiable part of a fin. A piece of nape membrane consists of one piece ½ square inch in area or larger. "Scales" are aggregates of one or more scales of such degree as to be considered objectionable. Skin is not to be considered a blemish on Style II block. Blemishes are measured on a 5-pound portion cut from the edge of the fish block and thawed.

(2) "Bones" refers to any potentially harmful bones in the fish block. A potentially harmful bone is one that after being cooked is capable of piercing or hurting the palate. One instance of bones means one bone or group of bones occupying or contacting a circular area of 1 square inch. Bones are measured on the same 5-pound thawed portion cut from the fish block.

(c) *Examination of the cooked product.* (1) Heating in a suitable manner means heating the product in one of two ways, as follows:

(i) Cut three or more portions about 4 by 3 by ½ inches from a frozen block. Wrap them individually or in a single layer in aluminum foil. Place the package portions on a wire rack suspended over boiling water in a covered container. Steam the packaged portions until the product is thoroughly heated, or

(ii) Cut and package the portions as previously described. Place the packaged portions on a flat cookie sheet or shallow flat-bottom pan of sufficient size so that the packages can be evenly spread on the sheet or pan. Place the pan and frozen contents in a properly ventilated oven heated to 400° F. and remove when the product is thoroughly heated.

(2) Texture refers to the condition of the cooked fish flesh. The texture should be firm, slightly resilient, but not tough or rubbery; and should be moist, but not mushy. Deductions for texture will follow the deductions assessed in table 1.

(3) Flavor and odor is evaluated organoleptically as described in § 264.111 (b).

(d) *General definitions.* (1) "Demonstrably acceptable" shall mean that the product has been produced commercially and met customer acceptance.

(2) "Adversely affected" shall mean that the unit cut would deviate more than 15 percent plus or minus from 1 ounce.

(3) "Small" (overall assessment) refers to a condition that is noticeable, but is not seriously objectionable.

(4) "Large" (overall assessment refers to a condition that is not only noticeable, but is seriously objectionable.

(5) "Minor (measured quantity or area) refers to a defect that affects the appearance or utility of the product or both.

(6) "Major" (measured quantity or area) refers to a defect that seriously affects the appearance or utility of the product or both.

§ 264.125 Tolerances for certification of officially drawn samples.

The sample rates and grades of specific lots shall be certified in accordance with Part 260 Subpart A of this chapter (Regulations Governing Processed Fishery Products).

Subpart B—[Reserved]

Subpart C—United States Standards for Grades of Frozen Raw Fish Portions

§ 264.201 Description of the product.

The product described in this part consists of clean, wholesome, shaped masses of cohering pieces (not ground) of fish flesh. The fish portions are cut from frozen fish blocks, and are packaged in accordance with good manufacturing practice. They are maintained at temperatures necessary for the preservation of the product. All fish portions in an individual package are prepared from the flesh of one species of fish.

§ 264.202 Styles.

(a) *Style I—Skinless portions.* Portions prepared from fish blocks which have been made with skinless fillets.

(b) *Style II—Skin-on portions.* Portions prepared from fish blocks which have been made from demonstrably acceptable skin-on fillets.

§ 264.203 Types.

(a) *Type I—Uniform shaped.* All portions in the sample are uniformly shaped.

(b) *Type II—Specialty cut.* All portions not covered in Type I.

§ 264.204 Grades.

(a) "U.S. Grade A" is the quality of frozen raw fish portions that (1) possess a good flavor and odor and that (2) for those factors that are rated in accordance with the scoring system outlined in this part, have a total score of 85 to 100 points.

(b) "U.S. Grade B" is the quality of frozen raw fish portions that (1) possess at least reasonably good flavor and odor, and that (2) rate a total score of not less than 70 points for those factors of quality that are rated in accordance with the scoring system outlined in this part.

(c) "Substandard" or "Utility" is the quality of frozen raw fish portions that meet the requirements of § 264.201 but that otherwise fail to meet the requirements of "U.S. Grade B."

§ 264.205 Labeling requirements for styles of frozen fish portions.

Section 260.86 (a), (b), and (c) of this chapter states the requirements for the use of approved grade marks, inspection marks and combined grade and inspection marks on processed fishery products. When an approved inspection mark is used on Style II (§ 264.202) of frozen raw fish portions, that style shall be conspicuously revealed on the label as having been made from "skin-on fillets."

§ 264.211 Determination of the grade.

The grade is determined by examining the product for factors 1–8 in the frozen state and factors 9–11 in the cooked state.

(a) *Factors rated by score points.* Points are deducted for variations in the quality of each factor in accordance with the schedule in Table I. The total of points deducted is subtracted from 100 to obtain the score. The maximum score is 100, the minimum score is 0.

(b) *Factors not rated by score points.* The factor of "flavor and odor" is evaluated organoleptically by smelling and tasting after the product has been cooked in accordance with § 264.221(c).

(1) Good flavor and odor (essential requirements for U.S. Grade A product) means that the cooked product has the typical flavor and odor of the indicated species and is free from rancidity, bitterness, staleness, and other off-flavor and odors of any kind.

(2) Reasonably good flavor and odor (minimum requirements of a U.S. Grade B product) means that the cooked product is lacking in good flavor and odor, but is free from objectionable off-flavors and off-odors of any kind.

§ 264.221 Definitions and methods.

(a) *Selection of the sample unit.* The sample unit shall consist of 10 frozen raw fish portions taken at random from one or more packages as required. The fish portions for examination in the frozen and cooked state are spread out on a flat pan or sheet and are examined according to Table 1. Definition of factors for point deductions are as follows:

(b) *Examination of sample, frozen state.* (1) "Ease of separation" refers to the difficulty of separating the portions from each other or from the packaging material.

(2) "Broken portion" means a portion with a break or cut equal to or greater than one-half the width or length of the portion.

(3) "Damaged portion" means a portion that has been mashed, physically or mechanically injured, misshaped or mutilated to the extent that its appearance is materially affected. The amount of damage is determined by using a grid composed of squares ¼ inch x ¼ inch to measure the area of the portion affected. No deductions are made for damage of less than ¼ inch x ¼ inch.

(4) "Voids" refer to objectionable holes, spaces, or depressions in the fish flesh. Instances of voids refer to each occurrence measured by placing a plastic grid marked off in ¼-inch squares at last ⅛ inch in depth over the affected area. Each square is counted as one whether it is full or fractional. No deductions are made for voids of less than ¼ inch x ¼ inch.

TABLE 1. SCHEDULE OF POINT DEDUCTIONS PER SAMPLE

Factors scored	Method of determining points	Deduct
FROZEN STATE		
1 Ease of separation	Minor: Hand separated with difficulty. Each affected	2
	Major: Separated only by knife or other instrument. Each affected	6
2 Broken portion	Break or cut greater than ⅛ width or length. Each affected	10
3 Damaged portion	Mashed, mechanically and/or physically injured, misshaped or mutilated.	
	Minor: 1 to 5 instances.[1] Each affected	2
	Major: Over 5 instances. Each affected	4
4 Voids	Holes, spaces, or depressions:	
	Minor: 1 to 5 instances. Each affected	1
	Major: Over 5 instances. Each affected	2
5 Discoloration (overall assessment).	Small degree: Slight yellowing or rusting	10
	Large degree: Excessive yellowing or rusting	31
6 Dehydration (overall assessment).	Surface dehydration:	
	Small degree: Easily scraped off with fingernail. Each affected	5
	Large degree: Deep dehydration not easily scraped off, affecting over 10 percent of surface area. Each affected.	10
7 Uniformity of size	Deviation in length or width between the 2 largest and 2 smallest portions that are similarly shaped.	
	Up to ¼ inch	0
	Over ¼ inch and up to ½ inch	3
	Over ½ inch	10
8 Uniformity of weight	Weight ratio of 2 heaviest divided by the 2 lightest.	
	Over 1.0 but not over 1.2	0
	Over 1.2 but not over 1.3	5
	Over 1.3 but not over 1.4	7
	Over 1.4	10
COOKED STATE		
9 Blemishes	Skin (except for Style II) blood spots, bruises and discolorations.	
	Minor: 1 to 6 instances.[1] Each affected	2
	Major: Over 6 instances. Each affected	4
10 Bones	Portions containing bones (potentially harmful). Each affected	10
11 Texture (overall assessment).	Small degree: Moderately dry, soggy, or tough	5
	Large degree: Dry to the point of fibrousness, very mushy, tough, or rubbery skin (Style II).	15

[1] An instance = each ¼-inch square.

(5) "Discoloration" is considered as a deviation in color from that normal to the species present in the portions.

(6) "Dehydration" refers to the presence of dehydrated (water-removed) tissue in the portions. Slight dehydration is surface dehydration which is not color-masking. Deep dehydration is color-masking and cannot be removed by scraping with a blunt instrument.

(7) "Uniformity of size" refers to the degree of uniformity in length and width of the frozen portions. Deviations are measured from the combined lengths of the two shortest and/or the combined widths of the two widest minus the combined widths of the two narrowest in the sample. Deductions are not made for overall deviations in length or width up to ¼ inch.

(8) "Uniformity of weight" refers to the degree of uniformity of the weights of portions. Uniformity is measured by the combined weight of the two heaviest portions divided by the combined weight of the two lightest portions in the sample. No deductions are made for weight ratios less than 1.2 for Type I.

(c) *Examination of sample, cooked state.* Cooked state means the state of the sample after cooking in accordance with instructions accompanying the product. However, if specific instructions are lacking, cooking is accomplished by:

(1) *Boil in bag method.* Insert the sample of frozen portions into a boilable film-type pouch; fold the open end of the pouch over a suspension bar and clamp in place to provide a loose seal after evacuating the air by immersing the pouch into boiling water. Cook the contents for 20 minutes (until the internal temperature of the portions reaches 160° F.).

(2) *Steam method.* Use 10 frozen portions, wrap them individually or in a single layer in aluminum foil, and place the packaged portions on a wire rack suspended over boiling water in a covered container. Steam the packaged portions for 20 minutes.

(3) *Bake method.* Package the 10 frozen portions as previously described. Place the packaged portions on a flat cookie sheet or shallow flat-bottom pan of sufficient size so that the packages can be evenly spread on the sheet or pan. Place the pan and frozen contents in a properly ventilated oven preheated to 400° F. for 20 minutes.

(d) *Factors examined in cooked state.* (1) "Blemishes" refers to skin (except for Style II), blood spots or bruises, objectionable dark fatty flesh, or extraneous material. Instances of blemishes refer to each occurrence measured by placing a plastic grid market off in ¼-inch squares (1/16 square inch) over the defect area. Each square is counted as 1 whether it is full or fractional.

(2) "Bones" means the presence of potentially harmful bones in a portion. A potentially harmful bone is one that after being cooked is capable of piercing or hurting the palate.

(3) "Texture defects of the fish flesh and texture of skin in Style II" refers to the absence of the normal textural properties of the cooked fish flesh and to the absence of tenderness of the cooked skin in Style II. Normal textural properties of cooked fish flesh are tenderness, firmness, and moistness without excess water. Texture defects of the cooked flesh are dryness, mushiness, toughness, and rubberiness. Texture defects of the cooked skin in Style II are mushiness, rubberiness, toughness, and stringiness.

(e) *General definitions.* (1) "Small" (overall assessment) refers to a condition that is noticeable but is only slightly objectionable.

(2) "Large" (overall assessment) refers to a condition that not only is noticeable but is seriously objectionable.

(3) "Minor" (individual assessment) refers to a defect that slightly affects the appearance and/or utility of the product.

(4) "Major" (individual assessment) refers to a defect that seriously affects the appearance and/or utility of the product.

(5) "Net weight": The net weight of the portions if glazed shall be determined by the following method:

(i) Weigh the portions with the blaze intact, which gives the gross weight.

(ii) Thaw the glaze from the surfaces of the product with flowing tap water.

(iii) Gently wipe off the excess water from the surfaces with a single water saturated paper towel.

(iv) Weigh the deglazed portions, which gives the net weight.

§ 264.225 Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified in accordance with Part 260 Subpart A of this chapter (Regulations Governing Processed Fishery Products).

Subpart D—United States Standards for Grades of Frozen Raw Breaded Fish Sticks

§ 264.251 Description of the product.

Frozen raw breaded sticks are clean, wholesome, rectangular-shaped unglazed masses of cohering pieces (not ground) of fish flesh coated with breading. The sticks are cut from frozen fish blocks; are coated with a suitable, wholesome batter and breading; are packaged, and frozen in accordance with good commercial practice. They are maintained at temperatures necessary for preservation of the product. Frozen raw breaded fish sticks weigh up to and including 1½ ounces; are at least ⅜ inch thick; and their largest dimension is at least 3 times the next largest dimension. All sticks in an individual package are prepared from the flesh of one species of fish.

§ 264.252 Composition of the product.

(a) Frozen raw breaded fish sticks shall contain 72 percent by weight of fish flesh determined by the official end-product method as set forth in § 264.271(f). Fish flesh content may be determined by the on-line method as set forth in § 264.271 (g): *Provided*, That the results are consistent with the fish flesh content requirement of 60 percent by weight when verified by the official end-product method.

(b) Production methods employed in official establishments shall be kept relatively constant for each production lot so as to minimize variation in any factors which may affect the relative fish flesh content.

§ 264.253 Grades.

(a) "U.S. Grade A" is the quality of frozen raw breaded fish sticks that (1) possess good flavor and odor and (2) rate a tital score of not less than 85 points for those factors of quality that are rated in accordance with the scoring system outlined elsewhere in this part.

(b) "U.S. Grade B" is the quality of frozen raw breaded fish sticks that (1) possess at least reasonably good flavor and odor and (2) rate a total score of not less than 70 points for those factors of quality that are rated in accordance with the scoring system outlined in this part.

(c) "Substandard" is the quality of frozen raw breaded sticks that meet the requirements of § 264.251 *Description of product*, but otherwise fail to meet the requirements of "U.S. Grade B."

§ 264.261 Determination of the grade.

The grade is determined by examining the product in the frozen and cooked states and is evaluated by considering the following factors:

(a) *Factors rated by score points.* Points are deducted for variations in the quality of each factor in accordance with the schedule in Table 1. The total of points deducted is subtracted from 100 to obtain the score. The maximum score is 100; the minimum score is 0.

(b) *Factors not rated by score points.* The factor of "flavor and odor" is evaluated organoleptically by smelling, and tasting, after the product has been cooked in accordance with § 264.271(c).

(1) Good flavor and order (essential requirements for a Grade A (product) means that the cooked product has the typical flavor and odor of the indicated species of fish and of the breading and is free from rancidity bitterness, staleness, and off-flavors and off-odors of any kind.

(2) Reasonably good flavor and odor (minimum requirements of a Grade B product) means that the cooked product is lacking in good flavor and odor but is free from objectionable off-flavors and off-odors of any kind.

§ 264.271 Definitions.

(a) Selection of the sample unit: The sample unit shall consist of 10 frozen raw breaded fish sticks taken at random from one or more packages as required. The fish sticks are spread out on a flat pan or sheet and are examined according to Table 1. Definitions of factors for point deductions are as follows:

(b) Examination of sample, frozen state:

(1) "Condition of package" refers to the presence in the package of loose breading and/or loose frost.

(2) "Ease of separation" refers to the difficulty of separating sticks from each other or from packaging material that are frozen together during the freezing.

(3) "Broken stick" means a stick with a break or cut equal to or greater than one-half the width of the stick.

(4) "Damaged stick" means a stick that has been mashed, physically or mechanically injured, misshaped, or mutilated to the extent that its appearance is materially affected. The amount of damage is measured by using a grid composed of squares ¼ inch (that is, squares with an area of 1/16 square inch each) to measure the area of the stick affected. Deductions are not made for damage less than 1/16 square inch.

(5) "Uniformity of size" refers to the degree of uniformity in length and width of the frozen sticks. Deviations are measured from the combined lengths of the two longest minus the combined lengths of the two shortest and/or the combined widths of the two widest minus the combined widths of the two narrowest. Deductions are not made for overall deviations in length or width up to ⅛ inch.

(6) "Uniformity of weight" refers to the degree of uniformity of the weights of the sticks. Uniformity is measured by the combined weight of the two heaviest sticks divided by the combined weight of the two lightest sticks. No deductions are made for weight ratios less than 1.15.

(c) Cooked state means the state of the product after cooking in accordance with the instructions accompanying the product. However, if specific instructions are lacking, the product for inspection is cooked as follows: Transfer the product, while still in frozen state, into a wire mesh fry basket large enough to hold the fish sticks in a single layer and cook by immersing 2–3 minutes in 375° F. liquid or hydrogenated cooking oil. After cooking, allow the fish sticks to drain 15 seconds and place the fish sticks on a paper napkin or towel to absorb excess oil.

TABLE 1—SCHEDULE OF POINT DEDUCTIONS PER SAMPLE UNIT OF 10 STICKS

	Factors scored	Method of determining score	Deduct
		FROZEN STATE	
1	Condition of package	Small degree: Moderate loose breading and/or moderate frost	2
		Large degree: Excessive loose breading and/or excessive amount frost	5
2	Ease of separation	Minor: Hand separated with difficulty.—Each affected	1
		Major: Separated only by knife or other instrument.—Each affected	2
3	Broken stick	Break or cut greater than ½ length width.—Each affected	10
		Mashed, mechanically and/or physically injured, misshaped or mutilated [1]	
4	Damaged stick	Minor: 1 to 3 instances.—Each affected	2
		Major: Over 3 instances.—Each affected	4
5	Uniformity: Size	Deviation in length or width between the 2 largest and 2 smallest sticks is:	
		Up to ¼ inch	0
		Over ¼ inch and up to ½ inch	3
		Over ½ inch	10
6	Weight	Weight ratio of the 2 heaviest divided by the 2 lightest sticks:	
		Over 1.0; not over 1.15	0
		Over 1.15; not over 1.3	2
		Over 1.3; not over 1.4	5
		Over 1.4	10
		COOKED STATE	
7	Distortion	Minor: Bending, shrinking, twisting (¼ to ½ inch).—Each affected	1
		Major: Excessive bending, shrinking, twisting (over ½ inch).—Each affected	3
		Bare spots, blistering, ridges, breaks, curds [1]	
8	Coating defects	Minor: 1 to 3 instances.—Each affected	1
		Major: Over 3 instances.—Each affected	3
		Skin, blood spots, bruises, discolorations [1]	
9	Blemishes	Minor: 1 to 6 instances.—Each affected	2
		Major: Over 6 instances.—Each affected	4
10	Bones	Sticks containing bones (potentially harmful).—Each affected	10
11	Texture: Coating	Small degree: Moderately dry, soggy, doughy or tough	3
		Large degree: Farinaceous (mealy), pasty, very tough	15
12	Fish flesh	Small degree: Moderately dry, soft, mushy	5
		Large degree: Dry to the point of fibrousness, very mushy, tough or rubbery.	15

[1] An instance=each 1/16 square inch (¼-inch square).

(d) Examination of sample, cooked state:

(1) "Distortion" refers to the degree of bending of the long axis of the stick. Distortion is measured as the greatest deviation from the long axis. Deductions are not made for deviations of less than ¼ inch.

(2) "Coating defects" refers to breaks, lumps, ridges, depressions, blisters, or swells and curds in the coating of the cooked product. Breaks in the coating are objectionable bare spots through Lumps are objectionable outcroppings of breading on the stick surface. Ridges which the fish flesh is plainly visible, are projections of excess breading at the edges of the fish flesh. Depressions are objectionable visible voids or shallow areas which are lightly covered by breading. Blisters are measured by the swelling or exposed area in the coating resulting from the bursting or breaking of the coating. Curd refers to crater-like holes in the breading filled with coagulated albumin. Instances of these defects are measured by a plastic grid marked off in ¼-inch squares (1/16 square inch). Each square is counted as 1 whether it is full or fractional.

(3) "Blemishes" refers to skin, blood spots or bruises, objectionable dark fatty flesh, or extraneous material. In-

stances of blemishes refer to each occurrence measured by placing a plastic grid marked off in ¼-inch squares (1/16 square inch) over the defect area. Each square is counted as 1 whether it is full or fractional.

(4) "Bones" means the presence of potentially harmful bones in a stick. A potentially harmful bone is one that after being cooked is capable of piercing or hurting the palate.

(5) "Texture defects of the coating" refers to the absence of the normal textural properties of the coating which are crispness and tenderness. Coating texture defects are dryness, sogginess, mushiness, doughyness, toughness, pastryness, as sensed by starchiness or other sticky properties felt by mouth tissues and/or mealiness.

(6) "Texture defects of the fish flesh" refers to the absence of the normal textural properties of the cooked fish flesh, which are tenderness, firmness, and moistness without excess water. Texture defects of the flesh are dryness, mushiness, toughness, and rubberyness.

(e) General definitions:

(1) "Small" (overall assessment) refers to a condition that is noticeable but is not seriously objectionable.

(2) "Large" (overall assessment) refers to a condition that not only is noticeable but is seriously objectionable.

(3) "Minor" (individual assessment) refers to a defect that slightly affects the appearance and/or utility of the product.

(4) "Major" (individual assessment) refers to a defect that seriously affects the appearance and/or utility of the product.

(f) "Minimum fish flesh content—End-product determination" refers to the minimum percent, by weight, of the average fish flesh content of three frozen raw breaded fish sticks (sample unit for fish flesh determination), as determined by the following method:

(1) *Equipment needed.* (i) Water bath (for example, a 3- to 4-liter beaker).

(ii) Balance accurate to 0.1 gram.

(iii) Clip tongs of wire, plastic, or glass.

(iv) Stop-watch or regular watch readable to a second.

(v) Paper towels.

(vi) Spatula, 4-inch blade with rounded tip.

(vii) Nut pick.

(viii) Thermometer (immersion type) accurate to ±2° F.

(2) *Procedure.* (i) Calculate the weight of three frozen raw breaded fish sticks by dividing the declared net weight on the label by the number of fish sticks indicated on the label to obtain the weight of an individual fish stick and multiply by three. If the number of fish sticks contained in the package is not declared on the label, the actual weight of three frozen raw breaded fish sticks shall be used.

(ii) Using tongs, place each stick individually in the water bath maintained at 63° F. to 120° F. and allow to remain until the breading becomes soft and can easily be removed from the still frozen fish flesh (between 10 to 110 seconds for sticks held in storage at 0° F.).

(iii) At the end of the immersion, remove the fish stick from the water and blot the stick lightly with double thickness paper toweling. This step should be completed in no more than 7 seconds.

(iv) Scrape and remove the breading material and batter from the fish flesh with the spatula removing the softened breading material and batter from the narrow sides and ends of the stick on the initial movements, followed by removing the material from the wider flat surfaces.

(v) Residual batter and breading may remain on some sticks prepared using batters that are difficult to remove after one dipping. When this occurs redip the partially "debreaded" stick in 63° to 86° F. (room temperature) water for approximately 2 seconds. Follow step 3 toweling, and remove the softened residual batter and breading material.

(vi) Weigh all the "debreaded" fish sticks.

(vii) Calculate the percent of fish flesh in the sample unit by the following formula:

$$\text{Percent fish flesh} = \frac{\text{Weight of fish flesh (vi)}}{\text{Weight of three raw breaded fish sticks (i)}} \times 100$$

Example. The declared net weight of five 1 oz. breaded fish sticks would be 5 ounces. The average weight of three groups of five unbreaded fish sticks would be 3.6 ounces. The percent fish flesh would be 72.

$$\text{Percent fish flesh} = \frac{\text{Weight of fish flesh (sample unit) (i)} \times 100}{\text{Declared net weight of raw breaded fish sticks} \times 5\text{(i)}}$$

(g) "Minimum fish flesh content—On-line determination" refers to the minimum percent fish flesh, by weight, of the average weight of three groups of five fish sticks (sample unit for fish flesh determination), as determined by the following:

(1) Equipment needed—Balance accurate to 0.1 gram.

(2) Procedure:

(i) Weigh three groups of five raw unbreaded fish sticks from the line. These weights should be recorded and averaged (average weight of three groups of five sticks) and percent fish flesh calculated immediately after the average weights are determined.

(ii) Calculate the percent fish flesh in the sample unit by using the average weight of three groups of five unbreaded fish sticks and the declared net weight of five breaded fish sticks.

(iii) Frequency of on-line fish flesh content determination. A minimum of three determinations of fish flesh content shall be carried out for small production runs or lots, i.e., 3× (three groups of five unbreaded fish sticks). For larger production runs or lots, a minimum of 1 determination i.e., 1× (three groups of five unbreaded fish sticks), shall be carried out for every hour of production of product units of the same weight.

§ 264.272 Use of alternate methods of fish flesh determination.

(a) The end-product method in § 264.271(f) for determining fish flesh content shall be used for lot and appeal inspections and may be used for verification inspection.

(b) The on-line method in § 264.271(g) for determining fish flesh content may be used during processing operations.

§ 264.275 Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified in accordance with Part 260, Subpart A of this chapter (Regulations Governing Processed Fishery Products).

Subpart E—United States Standards for Grades of Frozen Raw Breaded Fish Portions

§ 264.301 Description of the product.

Frozen raw breaded portions are clean, wholesome, uniformly shaped, unglazed masses of cohering pieces (not ground) of fish flesh coated with breading. The portions are cut from frozen fish blocks; are coated with a suitable, wholesome batter and breading; and are packaged and frozen in accordance with good commercial practice. They are maintained at temperatures necessary for the preservation of the product. Frozen raw breaded fish portions weigh more than 1½ ounces, and are at least ⅜-inch thick. Frozen raw breaded fish portions contain not less than 75 percent, by weight, of fish flesh. All portions in an individual package are prepared from the flesh of one species of fish.

§ 264.302 Styles.

(a) *Style I—Skinless portions.* Portions prepared from fish blocks which have been made with skinless fillets.

(b) *Style II—Skin-on-portions.* Portions prepared from fish blocks which have been made with demonstrably acceptable skin-on fillets.

§ 264.303 Composition of the product.

(a) Frozen raw breaded fish portions shall contain 75 percent by weight of fish flesh determined by the official end-product method as set forth in § 264.321(f). Fish flesh content may be determined by the on-line method as set forth in § 264.321(g): *Provided,* That the results are consistent with the fish flesh content requirement of 75 percent by weight, when verified by the official end-product method.

(b) Production methods employed in official establishments shall be kept relatively constant for each production lot so as to minimize variation in any factors which may affect the relative fish flesh content.

264.304 Grades.

(a) "U.S. Grade A" is the quality of frozen raw breaded fish portions that (1) possess good flavor and odor and (2) rate a total score of not less than 85 points for those factors of quality that are rated in accordance with the scoring system outlined in this part.

(b) "U.S. Grade B" is the quality of frozen raw breaded fish portions that (1) possess at least reasonably good flavor and odor and (2) rate a total score of not less than 70 points for those factors of quality that are rated in accordance with the scoring system outlined in this part.

(c) "Substandard" is the quality of frozen raw breaded portions that meet the requirements of § 264.301, Description of Product, but otherwise fail to meet the requirements of "U.S. Grade B".

§ 264.305 Labeling requirements for styles of frozen raw breaded fish portions.

Section 260.86 (a), (b), and (c) of Part 260 states the requirements for the use of approved grade marks, inspection marks and combined grade and inspection marks on processed fishery products. When an approved inspection mark is used on Style II (§ 264.302) of frozen raw breaded fish portions, that style shall be conspicuously revealed on the label as having been made from "skin-on-fillets".

§ 264.311 Determination of the grade.

The grade is determined by examining the product in the frozen and cooked states and is evaluated in accordance with the following factors:

(a) *Factors rated by score points.* Points are deducted for variations in the quality of each factor in accordance with the schedule in Table 1. The total points deducted is subtracted from 100 to obtain the score. The maximum score is 100; the minimum score is 0.

(b) *Factors not rated by score points.* The factor of "flavor and odor" is evaluated organoleptically by smelling and tasting, after the product has been cooked in accordance with § 264.321(c).

(1) Good flavor and odor (essential requirements for a Grade A product) means that the cooked product has the typical flavor and odor of the indicated species of fish and of the breading and is free from rancidity, bitterness, staleness, and off-flavors and off-odors of any kind.

(2) Reasonably good flavor and odor (minimum requirements of a Grade B product) means that the cooked product is lacking in good flavor and odor but is free from objectionable off-flavors and off-odors of any kind.

TABLE 1—SCHEDULE OF POINT DEDUCTIONS PER SAMPLE UNIT OF 10 PORTIONS

				Factors scored	Method of determining score	Deduct
Frozen state	I			Condition of package	Small degree: Moderate loose breading and/or moderate frost	3
					Large degree: Excessive loose breading and/or excessive amount frost.	6
	II			Ease of separation	Minor: Hand separated with difficulty. Each affected	1
					Major: Separated only by knife or other instrument. Each affected	2
	III			Broken portion	Break or cut greater than ½ width or length. Each affected	10
	IV			Damaged portion	Mashed, mechanically and/or physically injured, misshaped or mutilated.[1]	
					Minor: 1 to 5 instances. Each affected	2
					Major: Over 5 instances. Each affected	4
	V	Uniformity	Size		Deviation in length or width between the 2 largest and 2 smallest portion is:	
					Up to ½ inch	0
					Over ½ inch and up to ½ inch	3
					Over ½ inch	10
	VI	Uniformity	Weight		Weight ratio of the 2 heaviest divided by the 2 lightest portions:	
					Over 1.2 but not over 1.3	0
					Over 1.3 but not over 1.4	2
					Over 1.4	10
Cooked state	VII			Distortion	Minor: Bending, shrinking, twisting—¼ to ½ inch. Each affected	1
					Major: Excessive bending, shrinking, twisting—over ½ inch. Each affected.	2
	VIII			Coating defects	Bare spots, blistering, ridges, breaks, curds:[1]	
					Minor: 1 to 6 instances. Each affected	1
					Major: Over 6 instances. Each affected	2
	IX			Blemishes	Skin (except for style II), blood spots, bruises, and discolorations:[1]	
					Minor: 1 to 6 instances. Each affected	2
					Major: Over 6 instances. Each affected	4
	X			Bones	Portions containing bones (potentially harmful). Each affected	10
	XI	Texture	Coating		Small degree: Moderately dry, soggy, doughy, or tough	5
					Large degree: Farinaceous (mealy), pasty, very tough	15
	XII	Texture	Fish flesh		Small degree: Moderately dry, soft, mushy	5
					Large degree: Dry to the point of fibrousness, very mushy, tough, or rubbery (skin for sytle II).	15

[1] An instance = each 1/16 square inch (¼-inch square).

§ 264.321 Definitions.

(a) Selection of the sample unit: The sample unit shall consist of 10 frozen raw breaded fish portions taken at random from one or more packages as required. The fish portions are spread out on a flat pan or sheet and are examined according to Table 1. Definitions of factors for point deductions are as follows:

(b) Examination of sample, frozen state: (1) "Condition of package" refers to the presence in the package of loose breading and/or loose frost.

(2) "Ease of separation" refers to the difficulty of separating the portions from each other or from the packaging material.

(3) "Broken portion" means a portion with a break or cut equal to or greater than one-half the width or length of the portion.

(4) "Damaged portion" means a portion that has been mashed, physically or mechanically injured, misshaped, or mutilated to the extent that its appearance is materially affected. The amount of damage is measured by using a grid composed of squares ¼-inch x ¼-inch (that is, squares with an area of 1/16 square inch each) to measure the area of the portion affected. No deductions are made for damage of less than 1/16 square inch.

(5) "Uniformity of size" refers to the degree of uniformity in length and width of the frozen portions. Deviations are measured from the combined lengths of the two longest minus the combined lengths of the two shortest and/or the combined widths of the two widest minus the combined widths of the two narrowest portions in the sample. Deductions are not made for overall deviations in length or width up to ¼ inch.

(6) "Uniformity of weight" refers to the degree of uniformity of the weights of the portions. Uniformity is measured by the combined weight of the two heaviest portions divided by the combined weight of the two lightest portions in the sample. No deductions are made for weight ratios less than 1.2.

(c) (1) Cooked state means the state of the product after being cooked in accordance with the instructions accompanying the product. If, however, specific instructions are lacking, the product being inspected is cooked as follows:

(2) Transfer the product, while still frozen, into a wire mesh fry basket large enough to hold the fish portions in a single layer and cook by immersing them

3–5 minutes in liquid or hydrogenated cooking oil heated to 350° to 375° F. After cooking, allow the fish portions to drain 15 seconds and place them on a paper napkin or towel to absorb excess oil.

(d) Examination of sample, cooked state.

(1) "Distortion" refers to the degree of bending of the long axis of the portion. Distortion is measured as the greatest deviation from the long axis. Deductions are not made for deviations of less than ¼ inch.

(2) "Coating defects" refers to breaks, lumps, ridges, depressions, blisters or swells and curds in the coating of the cooked product. Breaks in the coating are objectionable bare spots through which the fish flesh is plainly visible. Lumps are objectionable outcroppings of breading on the portion surface. Ridges are projections of excess breading at the edges of the portions. Depressions are objectionable visible voids or shallow areas that are lightly covered by breading. Blisters are measured by the swelling or exposed area in the coating resulting from the bursting or breaking of the coating. Curd refers to crater-like holes in the breading filled with coagulated white or creamy albumin. Instances of these defects are measured by a plastic grid marked off in ¼-inch squares (1/16 square inch). Each square is counted as 1 whether it is full or fractional.

(3) "Blemishes" refers to skin (except for Style II), blood spots or bruises, objectionable dark fatty flesh, or extraneous material. Instances of blemishes refers to each occurrence measured by placing a plastic grid marked off in ¼-inch squares (1/16 square inch) over the defect area. Each square is counted as 1 whether it is full or fractional.

(4) "Bones" means the presence of potentially harmful bones in a portion. A potentially harmful bone is one that after being cooked is capable of piercing or hurting the palate.

(5) "Texture defects of the coating" refers to the absence of the normal textural properties of the coating which are crispness and tenderness. Defects in coating texture are dryness, sogginess, mushiness, doughyness, toughness, pastyness, as sensed by starchiness or other sticky properties felt by mouth tissues and/or mealiness.

(6) "Texture defects of the fish flesh and texture of skin in Style II" refers to the absence of the normal textural properties of the cooked fish flesh and to the absence of tenderness of the cooked skin in Style II. Normal textural properties of cooked fish flesh are tenderness, firmness, and moistness without excess water. Texture defects of the cooked flesh are dryness, mushiness, toughness, and rubberyness. Texture defects of the cooked skin in Style II are mushiness, rubberyness, toughness, and stringiness.

(e) General definitions. (1) "Small" (overall assessment) refers to a condition that is noticeable but is not seriously objectionable.

(2) "Large" (overall assessment) refers to a condition that not only is noticeable but is seriously objectionable.

(3) "Minor" (individual assessment) refers to a defect that slightly affects the appearance and/or utility of the product.

(4) "Major" (individual assessment) refers to a defect that seriously affects the appearance and/or utility of the product.

(f) "Minimum fish flesh content—End-product determination" refers to the minimum percent, by weight, of the average fish flesh content of three frozen raw breaded portions (sample unit for fish flesh determination), as determined by the following method:

(1) *Equipment needed.* (i) Water bath (for example, a 3 to 4 liter beaker).

(ii) Balance accurate to 0.1 gram.

(iii) Clip tongs of wire, plastic, or glass.

(iv) Stop-watch or regular watch readable to a second.

(v) Paper towels.

(vi) Spatula, 4-inch blade with rounded tip.

(vii) Nut pick.

(viii) Thermometer (immersion type) accurate to ±2° F.

(2) *Procedure.*

(i) Calculate the weight of three frozen raw breaded portions by dividing the declared net weight on the label by the number of portions indicated on the label to obtain the weight of an individual portion and multiply by three. If the number of portions contained in the package is not declared on the label, the actual weight of three frozen raw breaded portions shall be used.

(ii) Using tongs, place each portion individually in the water bath maintained at 63° F. to 120° F. and allow to remain until the breading becomes soft and can easily be removed from the still frozen fish flesh (between 10 to 110 seconds for portions held in storage at 0° F.).

(iii) At the end of the immersion, remove the fish portion from the water and blot the stick lightly with double thickness paper towelings. This step should be completed in no more than 7 seconds.

(iv) Scrape and remove the breading material and batter from the fish flesh with the spatula removing the softened breading material and batter from the narrow sides and ends of the portion on the initial movements, followed by removing the material from the wider flat surfaces.

(v) Residual batter and breading may remain on some portions prepared using batters that are difficult to remove after one dipping. When this occurs, redip the partially "debreaded" portion in 63° to 86° F. (room temperature) water for approximately 2 seconds. Follow step 3 toweling, and remove the softened residual batter and breading material.

(vi) Weigh all the "debreaded" fish portions.

(vii) Calculate the percent fish flesh in the sample unit by the following formula:

$$\text{Percent fish flesh} = \frac{\text{Weight of fish flesh (vi)}}{\text{Weight of three raw breaded portions (i)}} \times 100$$

(g) "Minimum fish flesh content—On-line determination" refers to the minimum percent fish flesh, by weight, of the average weight of three groups of five portions (sample unit for fish flesh determination), as determined by the following:

(1) Equipment needed—Balance accurate to 0.1 gram.

(2) Procedure:

(i) Weigh three groups of five raw unbreaded portions from the line. These weights should be recorded and averaged (average weight of three groups of five portions) and percent fish flesh calculated immediately after the average weights are determined.

(ii) Calculate the percent fish flesh in the sample unit by using the average weight of three groups of five unbreaded portions and the declared net weight of five finished product units.

Example. The declared net weight of five 4 oz. finished product units would be 20 ounces or 565 grams. The average weight of three groups of five unbreaded portions would be 15 ounces or 424 grams. The percent fish flesh would be 75.

$$\text{Percent fish flesh} = \frac{\text{Weight of fish flesh (sample unit (i))}}{\text{Declared net weight of raw breaded portions} \times 5 \text{ (ii)}} \times 100$$

(iii) Frequency of on-line fish flesh content determination shall be minimum of three determinations of fish flesh content for small production runs or lots, i.e., 3× (three groups of five unbreaded portions). For larger production runs or lots, a minimum of one determination i.e., 1× (three groups of five unbreaded portions), shall be made for every hour of production of product units of the same weight.

§ 264.322 Use of alternate methods of fish flesh determination.

(a) The end-product method in § 264.321(f) for determining fish flesh content shall be used for lot and appeal inspections and may be used for verification inspection.

(b) The on-line method in § 264.321(g) for determining fish flesh content may be used during processing operations.

§ 264.325 Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified in accordance with Part 260, Subpart A of this chapter (Regulations Governing Processed Fishery Products), except that a sample unit shall consist of 10 portions taken at random from one or more packages as required.

Subpart F—United States Standards for Grades of Frozen Fried Fish Sticks

§ 264.351 Description of the product.

Frozen fried fish sticks are clean, wholesome, rectangular-shaped unglazed masses of cohering pieces (not ground) of fish flesh coated with breading and partially cooked. The sticks are cut from frozen fish blocks; are coated with a suitable, wholesome batter and breading; are fried, packaged, and frozen in accordance with good manufacturing practices. They are maintained at temperatures necessary for preservation of the product. Frozen fried fish sticks weigh up to and including 1½ ounces; are at least three-eighths of an inch thick; and their largest dimension is at least three times the next largest dimension. All sticks in an individual package are prepared from the flesh of one species of fish.

§ 264.352 Composition of the product.

(a) Frozen fried fish sticks shall contain 60 percent by weight of fish flesh determined by the official end-product method as set forth in § 264.371(f). Fish flesh content may be determined by the on-line method as set forth in § 264.371(g): *Provided*, That the results are consistent with the fish flesh content requirement of 60 percent by weight, when verified by the official end-product method.

(b) Production methods employed in official establishments shall be kept relatively constant for each production lot so as to minimize variation in any factors which may affect the relative fish flesh content.

§ 264.353 Grades.

(a) "U.S. Grade A" is the quality of frozen fried fish sticks that (1) possess good flavor and odor and (2) rate a total score of not less than 85 points for those factors of quality that are rated in accordance with the scoring system outlined elsewhere in this part.

(b) "U.S. Grade B" is the quality of frozen fried fish sticks that (1) possess at least reasonably good flavor and odor and (2) rate a total score of not less than 70 points for those factors of quality that are rated in accordance with the scoring system outlined in this part.

(c) "Substandard" is the quality of frozen fried fish sticks that meet the requirements of § 264.351 *Description of product*, but otherwise fail to meet the requirements of "U.S. Grade B."

§ 264.361 Determination of the grade.

The grade is determined by examining the product in the frozen and cooked states and is evaluated by considering the following factors:

(a) *Factors rated by score points.* Points are deducted for variations in the quality of each factor in accordance with the schedule in Table 1. The total of points deducted is subtracted from 100 to obtain the score. The maximum score is 100; the minimum score is 0.

(b) *Factors not rated by score points.* The factor of "flavor and odor" is evaluated organoleptically by smelling, and tasting, after the product has been cooked in accordance with § 264.371.

(1) Good flavor and odor (essential requirements for a Grade A Product) means that the cooked product has the typical flavor and odor of the indicated species of fish and of the breading and is free from rancidity, bitterness, staleness, and off-flavors and off-odors of any kind.

(2) Reasonably good flavor and odor (minimum requirements of a Grade B Product) means that the cooked product is lacking in good flavor and odor but is free from objectable off-flavors and off-odors of any kind.

TABLE 1—SCHEDULE OF POINT DEDUCTIONS PER SAMPLE UNIT OF 10 STICKS

FROZEN STATE

	Factors scored	Method of determining score	Deduct
1	Condition of package	Small degree: Loose free oil, and/or moderate loose breading and/or moderate frost.	2
		Large degree: Oil soaking through package and/or excessive loose breading and/or excessive amount frost.	5½
2	Ease of separation	Minor: Hand separated with difficulty.—Each affected	1
		Major: Separated only by knife or other instrument.—Each affected	10
3	Broken stick	Break or cut greater than ½ length or width.—Each affected	
		Mashed, mechanically and/or physically injured, misshaped or mutilated [1]	
4	Damaged stick	Minor: 1 to 3 instances.—Each affected	2
		Major: Over 3 instances.—Each affected	4
5	Uniformity: Size	Deviation in length or width between the 2 largest and 2 smallest sticks is:	
		Up to ¼ inch	0
		Over ¼ inch and up to ½ inch	5
		Over ½ inch	10
6	Weight	Weight ratio of the 2 heaviest divided by the 2 lightest sticks:	
		Over 1.0; not over 1.15	0
		Over 1.15; not over 1.3	2
		Over 1.3; not over 1.4	5
		Over 1.4	10
7	Distortion	Minor: Bending, shrinking, twisting (¼ to ½ inch).—Each affected	1
		Major: Excessive bending, shrinking, twisting (over ½ inch).—Each affected	2
8	Color	Minor: Sticks differing slightly from average color of sticks in sample unit.—Each affected	2
		Major: Sticks excessively dark or light from average color of sticks in sample unit.—Each affected	4
		Bare spots, blistering, ridges, breaks, curds [1]	
9	Coating defects	Minor: 1 to 3 instances.—Each affected	1
		Major: Over 3 instances.—Each affected	3
		Skin, blood spots, bruises, discolorations [1]	
10	Blemishes	Minor: 1 to 6 instances.—Each affected	1
		Major: Over 6 instances.—Each affected	3
11	Bones	Sticks containing bones (potentially harmful).—Each affected	10
12	Texture: Coating	Small degree: Moderately dry, soggy, doughy, oily, and tough	5
		Large degree: Farinaceous (mealy), pasty, very tough and/or oily	15
13	Fish flesh	Small degree: Moderately dry, soft, mushy	5
		Large degree: Dry to the point of fibrousness, very mushy, tough, and rubbery.	15

[1] An instance=each 1/16 square inch (¼-inch square).

§ 264.371 Definitions.

(a) Selection of the sample unit: The sample unit shall consist of 10 frozen fried fish sticks taken at random from one or more packages as required. The fish sticks are spread out on a flat pan or sheet and are examined according to Table 1. Definitions of factors for point deductions are as follows:

(b) Examination of sample, frozen state:

(1) "Condition of package" refers to the presence in the package of free excess oil and/or loose breading and/or loose frost.

(2) "Ease of separation" refers to the difficulty of separating sticks from each other or from packaging material that are frozen together after the frying operation and during the freezing.

(3) "Broken stick" means a stick with a break or cut equal to or greater than one-half the width of the stick.

(4) "Damaged stick" means a stick that has been mashed, physically or mechanically injured, misshaped or mutilated to the extent that its appearance is materially affected. The amount of damage is measured by using a grid composed of squares ¼ inch (that is, squares with an area of 1/16 square inch each) to measure the area of the stick affected. Deductions are not made for damage less than 1/16 square inch.

(5) "Uniformity of size" refers to the degree of uniformity in length and width of the frozen sticks. Deviations are measured from the combined lengths of the two longest minus the combined lengths of the two shortest and/or the

combined widths of the two widest minus the combined widths of the two narrowest. Deductions are not made for overall deviations in length of width up to ¼ inch.

(6) "Uniformity of weight" refers to the degree of uniformity of the weights of the sticks. Uniformity is measured by the combined weight of the two heaviest sticks divided by the combined weight of the two lightest sticks. No deductions are made for weight ratios less than 1.15.

(c) Cooked state means the state of the product after cooking in accordance with the instructions accompanying the product. However, if specific instructions are lacking, the product for inspection is cooked as follows: Transfer the product, while still in frozen state, onto a flat pan or sheet of sufficient size to accommodate 10 sticks spaced at least ¼ inch apart. Place the pan and frozen contents in a properly ventilated oven preheated to 400° F. until thoroughly cooked (about 15 to 18 minutes or to an internal temperature of 160° F.).

(d) Examination of sample, cooked state:

(1) "Distortion" refers to the degree of lending of the long axis of the stick. Distortion is measured as the greatest deviation from the long axis. Deductions are not made for deviations of less than ¼ inch.

(2) "Color" refers to the reasonably uniform color typical of the sample material.

(3) "Coating defects" refers to breaks, lumps, ridges, depressions, blisters or swells and curds in the coating of the cooked product. Breaks in the coating are objectionable bare spots through which the fish flesh is plainly visible. Lumps are objectionable outcroppings of breading on the stick surface. Ridges are projections of excess breading at the edges of the fish flesh. Depressions are objectionable visible voids or shallow areas which are lightly covered by breading. Blisters are measured by the swelling or exposed area in the coating resulting from the bursting or breaking of the coating. Curd refers to crater-like holes in the breading filled with coagulated albumin. Instances of these defects are measured by a plastic grid marked off in ¼-inch squares (1/16 square inch). Each square is counted as one whether it is full or fractional.

(4) "Blemishes" refers to skin, blood spots, or bruises, objectional dark fatty flesh, carbon specks or extraneous material. Instances of blemishes refers to each occurrence measured by placing a plastic grid marked off in ¼-inch squares (1/16 square inch) over the defect area. Each square is counted as one whether it is full or fractional.

(5) "Bones" means the presence of potentially harmful bones in a stick. A potientially harmful bone is one that after being cooked is capable of piercing or hurting the palate.

(6) "Texture defects of the coating" refers to the absence of the normal textural properties of the coating which are crispness and tenderness. Coating texture defects are dryness, sogginess, mushiness, doughyness, toughness, pastyness, as sensed by starchiness or other sticky properties felt by mouth tissues; oiliness to the degree of impairment of texture; and/or mealiness.

(7) "Texture defects of the fish flesh" refers to the absence of normal textural properties of the cooked fish flesh, which are tenderness, firmness, and moistness without excess water. Texture defects of the flesh are dryness, softness, toughness, and rubberyness.

(e) General definitions:

(1) "Small" (overall assessment) refers to a condition that is noticeable but is not seriously objectionable.

(2) "Large" (overall assessment) refers to a condition that not only is noticeable but is seriously objectionable.

(3) "Minor" (individual assessment) refers to a defect that slightly affects the appearance and/or utility of the product.

(4) "Major" (individual assessment) refers to a defect that seriously affects the appearance and/or utility of the product.

(f) "Minimum fish flesh content—end-product determination" refers to the minimum percent, by weight, of the average fish flesh content of three frozen fried fish sticks (sample unit for fish flesh determination), as determined by the following method:

(1) *Equipment needed.* (i) Water bath (for example, a 3- to 4-liter beaker).

(ii) Balance accurate to 0.1 gram.

(iii) Clip tongs of wire, plastic, or glass.

(iv) Stop-watch or regular watch readable to a second.

(v) Paper towels.

(vi) Spatula, 4-inch blade with rounded tip.

(vii) Nut pick.

(viii) Thermometer (immersion type) accurate to ±2° F.

(2) *Procedure.* (i) Calculate the weight of three frozen fried fish sticks by dividing the declared net weight on the label by the number of fish sticks indicated on the label to obtain the weight of an individual fish stick and multiply by three. If the number of fish sticks contained in the package is not declared on the label, the actual weight of three frozen fried fish sticks shall be used:

(ii) Using tongs, place each stick individually in the water bath maintained at 63° F. to 120° F. and allow to remain until the breading becomes soft and can easily be removed from the still frozen fish flesh (between 10 to 110 seconds for sticks held in storage at 0° F.).

(iii) At the end of the immersion, remove the fish stick from the water and blot the stick lightly with double thickness paper towelings. This step should be completed in no more than 7 seconds.

(iv) Scrape and remove the breading material and batter from the fish flesh with the spatula removing the softened breading material and batter from the narrow sides and ends of the stick on the initial movements, followed by removing the material from the wider flat surfaces.

(v) Residual batter and breading may remain on some sticks prepared using batters that are difficult to remove after one dipping. When this occurs redip the partially "debreaded" stick in 63° to 86° F. (room temperature) water for approximately 2 seconds. Follow step 3 toweling, and remove the softened residual batter and breading material.

(vi) Weigh all the "debreaded" fish sticks.

(vii) Calculate the percent fish flesh in the sample unit by the following formula:

$$\% \text{ fish flesh} = \frac{\text{Weight of fish flesh (vi)}}{\text{Weight of three fried fish sticks (i)}} \times 100$$

(g) "Minimum fish flesh content—on-line determination" refers to the minimum percent fish flesh, by weight, of the average weight of three groups of five fish sticks (sample unit for fish flesh determination), as determined by the following:

(1) Equipment needed—balance accurate to 0.1 gram.

(2) Procedure:

(i) Weigh three groups of five raw unbreaded fish sticks from the line. These weights should be recorded and averaged (average weight of three groups of five sticks) and percent fish flesh calculated immediately after the average weights are determined.

(ii) Calculate the percent fish flesh in the sample unit by using the average weight of three groups of five unbreaded fish sticks and the declared net weight of five fried fish sticks. The declared net weight of five fried fish sticks is obtained by dividing the net weight declaration on the label by the number of fish sticks declared on the label and multiplying by 5. If the number of fish sticks is not declared on the label, the actual weight of five fried fish sticks shall be used.

$$\% \text{ fish flesh} = \frac{\text{Weight of fish flesh (sample unit (i))}}{\text{Declared or actual net weight of five fried fish sticks}} \times 100$$

NOTE: The percent fish flesh determined by the on-line method will usually differ from the percent fish flesh determined by the end-product method due to processing and variations associated therewith.

(iii) Frequency of on-line fish flesh content determination. A minimum of three determinations of fish flesh content shall be carried out for small production runs or lots, i.e., 3 x (three groups of five unbreaded fish sticks). For larger productions runs or lots, a minimum of one determination, i.e., 1 x (three groups of five unbreaded fish sticks) shall be carried out for every hour of production of product units of the same weight.

§ 264.372 Use of alternate methods for determining fish flesh content.

(a) The official end-product method in § 264.371(f) for determining fish flesh content shall be used for lot and appeal inspections, and for inspections for verification in official establishments when the on-line method is used.

(b) The on-line method in § 264.371(g) for determining fish flesh content may be used in official establishments during processing operations.

§ 264.375 Tolerances for certification of officially drawn samples.

The sample rate and grade of specific lots shall be certified in accordance with Part 260, Subpart A of this chapter (Regulations Governing Processed Fishery Products).

Subpart G—United States Standards for Grades of Frozen Fried Fish Portions

§ 264.401 Description of the product.

Frozen fried fish portions are clean, wholesome, uniformly shaped, unglazed masses of cohering pieces (not ground) of fish flesh coated with breading and partially cooked. The portions are cut from frozen fish blocks; are coated with a suitable, wholesome batter and breading; are fried, packaged, and frozen in accordance with good manufacturing practices. They are maintained at temperatures necessary for preservation of the product. Frozen fried fish portions weigh more than 1½ ounces and are at least three-eighths of an inch thick. All portions in an individual package are prepared from the flesh of one species of fish.

§ 264.402 Composition of the product.

(a) Frozen fried fish portions shall contain 65 percent by weight of fish flesh determined by the official end-product method as set forth in § 264.421(f). Fish flesh content may be determined by the on-line method as set forth in § 264.421 (g): *Provided,* That the results are consistent with the fish flesh content requirement of 65 percent by weight, when verified by the official end-product method.

(b) Production methods employed in official establishments shall be kept relatively constant for each production lot so as to minimize variation in any factors which may affect the relative fish flesh content.

§ 264.403 Grades.

(a) "U.S. Grade A" is the quality of frozen fried fish portions that (1) possess good flavor and odor and (2) rate a total score of not less than 85 points for those factors of quality that are rated in accordance with the scoring system outlined elsewhere in this part.

(b) "U.S. Grade B" is the quality of frozen fried fish portions that (1) possess at least reasonably good flavor and odor and (2) rate a total score of not less than 70 points for those factors of quality that are rated in accordance with the scoring system outlined in this part.

(c) "Substandard" is the quality of frozen fried fish portions that meet the requirements of § 264.401 *Description of product,* but otherwise fail to meet the requirements of "U.S. Grade B."

§ 264.411 Determination of the grade.

The grade is determined by examining the product in the frozen and cooked states and is evaluated by considering the following factors:

(a) *Factors rated by score points.* Points are deducted for variations in the quality of each factor in accordance with the schedule in Table 1. The total of points deducted is subtracted from 100 to obtain the score. The maximum score is 100; the minimum score is 0.

(b) *Factors not rated by score points.* The factor of "flavor and odor" is evaluated organoleptically by smelling and tasting, after the product has been cooked in accordance with § 264.421.

(1) Good flavor and odor (essential requirements for a Grade A product) means that the cooked product has the typical flavor and odor of the indicated species of fish and of the breading and is free from rancidity, bitterness, staleness, and off-flavors and off-odors of any kind.

(2) Reasonably good flavor and odor (minimum requirements of a Grade B product) means that the cooked product is lacking in good flavor and odor but is free from objectionable off-flavors and off-odors of any kind.

TABLE 1—SCHEDULE OF POINT DEDUCTIONS PER SAMPLE UNIT OF 10 PORTIONS

	Factors scored	Method of determining score	Deduct
		FROZEN STATE	
1	Condition of package	Small degree: Loose free oil, and/or moderate loose breading and/or moderate frost.	3
		Large degree: Oil soaking through package and/or excessive loose breading and/or excessive amount frost.	6
2	Ease of separation	Minor: Hand separated with difficulty.—Each affected	1
		Major: Separated only by knife or other instrument.—Each affected	2
3	Broken portion	Break or cut greater than ⅓ length or width.—Each affected	10
		Mashed, mechanically and/or physically injured, misshaped or mutilated [1]	
4	Damaged portion	Minor: 1 to 3 instances.—Each affected	2
		Major: Over 3 instances.—Each affected	4
5	Uniformity: Size	Deviation in length or width between the 2 largest and 2 smallest portions is:	
		Up to ¼ inch	0
		Over ¼ inch and up to ½ inch	3
		Over ½ inch	10
6	Weight	Weight ratio of the 2 heaviest divided by the 2 lightest portions:	
		Over 1.0; not over 1.20	0
		Over 1.20; not over 1.3	3
		Over 1.3; not over 1.4	6
		Over 1.4	10
		COOKED STATE	
7	Distortion	Major: Bending, shrinking, twisting (¾ to ½ inch).—Each affected	1
		Minor: Excessive bending, shrinking, twisting (over ½ inch).—Each affected	½
8	Color	Minor: Portions differing slightly from average color of portions in sample unit.—Each affected.	2
		Major: Portions excessively darker or lighter from average color of portions in sample unit.—Each affected.	4
		Bare spots, blistering, ridges, breaks, curds [1]	
9	Coating defects	Minor: 1 to 3 instances.—Each affected	1
		Major: Over 3 instances.—Each affected	3
		Skin, blood spots, bruises, discolorations [1]	
10	Blemishes	Minor: 1 to 6 instances.—Each affected	1
		Major: Over 6 instances.—Each affected	3
11	Bones	Portions containing bones (potentially harmful).—Each affected	10
12	Texture: Coating	Small degree: Moderately dry soggy, doughy, oily and/or tough	5
		Large degree: Farinaceous (mealy), pasty, very tough and/or oily	10
13	Fish flesh	Small degree: Moderately dry, soft, mushy	5
		Large degree: Dry to the point of fibrousness, very mushy, tough, and/or rubbery.	15

[1] An instance=each 1/16 square inch (¼-inch square).

264.421 Definitions.

(a) Selection of the sample unit:

The sample unit shall consist of 10 frozen fried fish portions take at random from one or more packages as required. The portions are spread out on a flat pan or sheet and are examined according to Table 1. Definitions of factors for point deductions are as follows:

(b) Examination of sample, frozen state:

(1) "Condition of package" refers to the presence in the package of free excess oil and/or loose breading and/or loose frost.

(2) "East of separation" refers to the difficulty of separating portions from each other or from packaging material that are frozen together after the frying operation and during the freezing.

(3) "Broken portion" means a portion with a break or cut equal to or greater than one-half the width or length of the portion.

(4) "Damaged portion" means a portion that has been mashed, physically or mechanically injured, misshaped or mutilated to the extent that its appearance is materially affected. The amount of damage is measured by using a grid composed of squares ¼ inch (that is, squares with an area of 1/16 square inch each) to measure the area of the portion affected. Deductions are not made for damage less than 1/16 square inch.

(5) "Uniformity of size" refers to the degree of uniformity in length and width of the frozen portions. Deviations are measured from the combined lengths of the two longest minus the combined lengths of the two shortest and/or the combined widths of the two widest minus the combined widths of the two narrowest. Deductions are not made for overall deviations in length or width up to ¼ inch.

(6) "Uniformity of weight" refers to the degree of uniformity of the weights of the portions. Uniformity is measured by the combined weight of the two heaviest portions divided by the combined weight of the two lightest portions. No deductions are made for weight ratios less than 1.20.

(c) Cooked state means the state of the product after cooking in accordance with the instructions accompanying the product. However, if specific instructions are lacking, the product for inspection is cooked as follows: Transfer the product, while still in frozen state, onto a flat pan or sheet of sufficient size to accommodate 10 portions spaced at least ¼ inch apart. Place the pan and frozen contents in a properly ventilated oven preheated to 420° F. until thoroughly cooked (about 15 to 18 minutes or to an internal temperature of 160° F.).

(d) Examination of sample, cooked state:

(1) "Distortion" refers to the degree of bending of the long axis of the portions. Distortion is measured as the greatest deviation from the long axis. Deductions are not made for deviations of less than ¼ inch.

(2) "Color" refers to the reasonably uniform color within the sample unit.

(3) "Coating defects" refers to breaks, lumps, ridges, depressions, blisters or swells and curds in the coating of the cooked product. Breaks in the coating are objectionable bare spots through which the fish flesh is plainly visible. Lumps are objectionable outcroppings of breading on the portion surface. Ridges are projects of excess breading at the edges of the fish flesh. Depressions are objectionable visible voids or shallow areas which are lightly covered by breading. Blisters are measured by the swelling or exposed area in the coating resulting from the bursting or breaking of the coating. Curd refers to crater-like holes in the breading filed with coagulated albumin. Instances of those defects are measured by a plastic grid marked off in ¼-inch squares (1/16 square inch). Each square is counted as 1 whether it is full or fractiosal.

(4) "Blemishes" refers to skin, blood spots or bruises, objectionable dark fatty flesh, carbon specks or extraneous material. Instances of blemishes refers to each occurrence measured by placing a plastic grid marked off ¼-inch squares (1/16 square inch) over the defect area. Each square is counted as 1 whether it is full or fractional.

(5) "Bones" means the presence of potentially harmful bones in a portion. A potentially harmful bone is one that after being cooked is capable of piercing or hurting the palate.

(6) "Texture defects of the coating" refers to the absence of the normal textural properties of the cooked coating which are crispness and tenderness. Coating texture defects are dryness, soggyness, mushiness, doughyness, toughness, pastyness, as sensed by starchiness or other sticky properties felt by mouth tissues; oiliness to the degree of impairment of texture; and/or mealiness.

(7) "Texture defects of the fish flesh" refers to the absence of the normal textural properties of the cooked fish flesh, which are tenderness, firmness, and moistness without excess water. Texture defects of the flesh are dryness, mushiness, toughness, and rubberyness.

(e) General definitions:

(1) "Small" (overall assessment) refers to a condition that is noticeable but is not seriously objectionable.

(2) "Large" (overall assessment) refers to a condition that not only is noticeable but also is seriously objectionable.

(3) "Minor" (individual assessment) refers to a defect that slightly affects the appearance and/or utility of the product.

(4) "Major" (individual assessment) refers to a defect that seriously affects the appearance and/or utility of the product.

(f) "Minimum fish flesh content—end-product determination" refers to the minimum percent, by weight, of the average fish flesh content of three frozen fried fish portions (sample unit for fish flesh determination), as determined by the following method:

(1) *Equipment needed.* (i) Water bath (for example, a 3- to 4-liter beaker).

(ii) Balance accurate to 0.1 gram.

(iii) Clip tongs of wire, plastic, or glass.

(iv) Stop watch or regular watch readable to a second.

(v) Paper towels.

(vi) Spatula, 4-inch blade with rounded tip.

(vii) Nut pick.

(viii) Thermometer (immersion type) accurate to ±2° F.

(2) *Procedure.* (i) Calculate the weight of three frozen fried fish portions by dividing the declared net weight on the label by the number of fish portions indicated on the label to obtain the weight of an individual fish portion and multiply by three. If the number of fish portions contained in the package is not declared on the label, the actual weight of three frozen fried fish portions shall be used.

(ii) Using tongs, place each portion individually in the water bath maintained at 63° F. to 120° F. and allow to remain until the breading becomes soft and can easily be removed from the still frozen fish flesh (between 10 to 110 seconds for portions held in storage at 0° F.).

(iii) At the end of the immersion, remove the fish portion from the water and blot the portion lightly with double thickness paper towelings. This step should be completed in no more than 7 seconds.

(iv) Scrape and remove the breading material and batter from the fish flesh with the spatula removing the softened breading material and batter from the narrow sides and ends of the portion on the initial movements, followed by removing the material from the wider flat surfaces.

(v) Residual batter and breading may remain on some portions prepared using batters that are difficult to remove after one dipping. When this occurs redip the partially "debreaded" portion in 63° to 86° F. (room temperature) water for approximately 2 seconds. Follow step 3 toweling, and remove the softened residual batter and breading material.

(vi) Weigh all the "debreaded" fish portions.

(vii) Calculate the percent fish flesh in the sample unit by the following formula:

$$\% \text{ fish flesh} = \frac{\text{Weight of fish flesh (vi)}}{\text{Weight of three fried fish portions (i)}} \times 100$$

(g) "Minimum fish flesh content—on-line determination" refers to the minimum percent fish flesh, by weight, of the average weight of three groups of five fish portions (sample unit for fish flesh determination), as determined by the following:

(1) Equipment needed—balance accurate to 0.1 gram.

(2) Procedure:

(i) Weigh three groups of five raw unbreaded fish portions from the line. These weights should be recorded and averaged (average weight of three groups of five portions and percent fish flesh calculated immediately after the average weights are determined.

(ii) Calculate the percent fish flesh in the sample unit by using the average weight of three groups of five unbreaded fish portions and the declared net weight of five fried fish portions. The declared net weight of five fried fish portions is obtained by dividing the net weight declaration on the label by the number of fish portions declared on the label and multiplying by 5. If the number of fish portions is not declared on the label the actual weight of 5 fried fish portions shall be used.

$$\% \text{ fish flesh} = \frac{\text{Weight of fish flesh (sample unit (i))}}{\text{Declared or actual net weight of five fried fish portions}} \times 100$$

NOTE: The percent fish flesh determined by the one-line method will usually differ from the percent fish flesh determined by the end-product method due to processing and variations associated therewith.

(iii) Frequency of on-line fish flesh content determination. A minimum of three determinations of fish flesh content shall be carried out for small production runs or lots, i.e., 3 x (three groups of five unbreaded fish portions). For larger production runs or lots, a minimum of one determination, i.e., 1 x (three groups of five unbreaded fish portions) shall be carrier out for every hour of production of product units of the same weight.

§ 264.422 Use of alternate methods for determining fish flesh content.

(a) The official end-product method in § 264.421(f) for determining fish flesh content shall be used for lot and appeal inspections, and for inspections for verification in official establishments when the on-line method is used.

(b) The on-line method in § 264.421(g) for determining fish flesh content may be used in official establishments during processing operations.

§ 264.425 Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified in accordance with Part 260, Subpart A of this chapter (Regulations Governing Processed Fishery Products)

PART 265—UNITED STATES STANDARDS FOR GRADES OF CRUSTACEAN SHELLFISH PRODUCTS

Subpart A—United States Standards for Grades of Frozen Raw Headless Shrimp

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AUTHORITY: 7 U.S.C. 1621–1630.

Subpart A—United States Standards for Grades of Frozen Raw Headless Shrimp

§ 265.101 Product description.

Frozen raw headless shrimp are clean, wholesome, headless, shell-on shrimp of the regular commercial species. They are sorted for size, packed, and frozen in accordance with good commercial practice and are maintained at temperatures necessary for the preservation of the product.

§ 265.102 Grades.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen raw headless shrimp of a single commercial count that possess a good flavor and odor, that are of a reasonably uniform color, and that for those factors which are rated in accordance with the scoring system outlined in the following sections, the total score is not less than 90 points.

(b) "U.S. Grade B" or "U.S. Good" is the quality of frozen raw headless shrimp of a single commercial count that possess at least reasonably good flavor and odor, and that for those factors which are rated in accordance with the scoring system outlined in the following sections, the total score is not less than 80 points.

(c) "U.S. Grade C" or "U.S. Commercial" is the quality of frozen raw headless shrimp of a single commercial count that possesses at least reasonably good flavor and odor, and that for those factors which are rated in accordance with the scoring system outlined in the following sections, the total score is not less than 70 points.

(d) "Substandard" is the quality of frozen raw headless shrimp that fail to meet the requirements of "U.S. Grade C" or "U.S. Commercial."

§ 265.103 Sizes.

The average weight and number of shrimp per pound (count) of frozen raw headless shrimp are not factors of quality in determining the grade of the product. However the degree of conformity of the weights of the individual shrimp to the average weight of shrimp in the sample is rated since it is a factor affecting the utility of the product. Descriptive size names are not recommended. The commercial count (number per pound) and descriptive size names, if used, shall conform to one of the following categories:

Commercial count—Number of shrimp per pound	Number of shrimp per pound (average)		Descriptive size name
	Over—	Not over—	
Under 8	----	8.9	Extra colossal.
10–15	8.9	15.0	Colossal.
16–20	15.0	20.5	Extra jumbo.
21–25	20.0	25.0	Jumbo.
26–30	25.0	30.0	Extra large.
31–35	30.0	35.0	Large.
36–42	35.0	42.0	Medium large.
43–50	42.0	50.0	Medium.
51–60	50.0	60.0	Small.
61–70	60.0	70.0	Extra small.
Over 70	70.0	----	Tiny.

§ 265.111 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards, the grade is ascertained by observing the product in the frozen, thawed, and cooked states and is evaluated by considering the following:

(1) *Factors rated by score points.* The quality of the product with respect to factors scored is expressed numerically. Factors rated by score points are: dehydration; deterioration; black spot on shell or loose membrane only; black spot on meat; broken, damaged, and pieces of shrimp; legs, loose shell, and flippers; heads and unacceptable shrimp; extraneous materials; uniformity of size; and the texture of the cooked product. Cumulative point deductions from the maximum possible score of 100 are assessed for variations of quality for each factor in accordance with the schedule in Table I. The minimum score is 0.

(2) *Factor not rated by score points.* The factor of "flavor and odor" is evaluated organoleptically after the product has been cooked in a suitable manner, and is defined as follows:

(i) *Good flavor and odor.* "Good flavor and odor" (essential requirement for a Grade A product) means that the product has the good flavor and odor characteristic of freshly caught, chilled shrimp and is free from off-flavors and off-odors of any kind. The presence of iodoform-like flavor and odor is not to be construed as off-flavor and off-odor.

(ii) *Reasonably good flavor and odor.* "Reasonably good flavor and odor" (minimum requirement of Grade B and Grade C products) means that the product may be somewhat lacking in the good flavor and odor characteristic of freshly caught, chilled shrimp but is free from objectionable off-flavors and objectionable off-odors of any kind.

§ 265.121 Definitions and methods of analysis.

(a) "Count," or number of shrimp per pound, is determined by dividing the number of shrimp in the package by the actual net weight in pounds of the shrimp.

(b) "Net weight" of the shrimp is determined as follows:

(1) *Equipment needed.* (i) Container, 4-gallon or more capacity;

(ii) Source of running water that can be maintained at 75°–85° F.; with hose of sufficient length to reach the bottom of the container.

(iii) Balance accurate to 0.01 ounce, or 0.1 gram;

(iv) U.S. standard wire sieve, ASTM No. 20, 12-inch diameter.

(2) *Procedure.* Place the frozen shrimp in the 4-gallon container into which fresh water of a temperature from 75° to 85° F. is introduced from the bottom at a flow of approximately 6 gallons per minute. After any glaze has been removed and the shrimp separate easily, empty the contents of the container through the tared sieve, spreading the shrimp out evenly. Tilt the sieve at approximately a 45-degree angle to facilitate drainage; drain the shrimp for 2 minutes; and then weigh the sieve and contents. The net weight is the weight of the sieve and contents minus the weight of the sieve.

(c) "Cooked in a suitable manner" means that a thawed sample of the product has been cooked by the following method:

Place 2 to 4 ounces of peeled deveined and rinsed shrimp in a boilable plastic bag with ½ cup of salt solution (1 teaspoon salt dissolved in 1 pint or 2 cups of water). Add a 2-ounce stainless steel weight or snap a large clip on bottom of bag. Suspend the bag in a kettle of boiling water and return the water to a boil as rapidly as possible. (More than one sample may be cooked at a time, as long as the water will return to a boil within 2 minutes.) After the water is boiling, cook according to the following timetable:

Count of shrimp—Number per pound	Cooking time (minutes)
Up to 15	12
16 to 35	9
Over 35	6

Remove from bag, drain, and cool to approximately room temperature (do not refrigerate) for evaluation of flavor and odor.

(d) "Dehydration" refers to the occurrence of a whitish area on the exposed ends of the shrimp, due to the drying of the affected area, and to a generally desiccated appearance of the meat after the shell is removed.

(e) "Deterioration" refers to any detectable change from the normal good quality of freshly caught shrimp. It is evaluated by noting deviations of the odor of the thawed product from the normal odor of freshly caught shrimp.

(1) "Slight deterioration" means that the shrimp lack the pleasant odor characteristic of freshly caught shrimp.

(2) "Moderate deterioration" means that the shrimp have slight off-odors.

(3) "Marked deterioration" means that the shrimp have definite off-odors, but are not spoiled.

(4) "Excessive deterioration" means that the shrimp have a definite odor of spoilage. Deductions in this category are made for individual shrimp which are affected.

(f) "Black spot on the shell or loose membrane only" refers to blackened areas at least moderately affecting the appearance of the shrimp.

(1) "Moderately affecting" means that the black spot which occurs at the shell joints extends at least one-third of the circumference of the shrimp at the particular location at which it occurs, and black spot which occurs as a circular area exceeds one-eighth inch in diameter for 31/35 count shrimp or is proportionately larger or smaller for respectively larger or smaller shrimp.

(g) "Black spot on the meat" refers to any darkened area that is present on the shrimp flesh.

(h) "Broken" refers to a shrimp having a break in the flesh greater than one-third of the thickness of the shrimp at the particular location at which it occurs.

(i) "Damaged" refers to a shrimp that is crushed or mutilated so as to materially affect its appearance.

(j) "Piece" refers to any portion of shrimp that contains less than five segments.

(k) "Legs" refers to walking legs only, not swimmerets, or to portions of the head (cephalothorax) with legs and which may be either loose or attached to a shrimp.

(l) "Loose shell" refers to any piece of shell which is completely detached from the shrimp except paper-thin shell from soft-shelled shrimp.

(m) "Flipper" refers to a tail fin, sometimes including the last shell segment but containing no meat.

(n) "Head" means any portion of head (cephalothorax) large enough to contain an eye and which may be either loose or attached to a shimp.

(p) "Extraneous material" means any material in the package which is not shrimp material.

(q) "Uniformity of size" is evaluated by computing the actual count per pound of the shrimp in the sample, and then determining, by weighing individual shrimp, the number of shrimp that are slightly large, slightly small, exceedingly large, or exceedingly small for that particular count per pound.

(1) "Slightly large" means that a shrimp is more than 25 percent, but not more than 35 percent larger, by weight, than a shrimp of the actual count per pound.

(2) "Exceedingly large" means that a shrimp is more than 35 percent larger, by weight, than a shrimp of the actual count per pound.

(3) "Slightly small" means that a shrimp is more than 25 percent, but not more than 35 percent smaller, by weight, than a shrimp of the actual count per pound.

(4) "Exceedingly small" means that a shrimp is more than 35 percent smaller, by weight, than a shrimp of the actual count per pound. For use in computing the uniformity of size factor, weights of individual shrimp are given in Table II.

(r) "Texture" defect refers to an undesirable toughness and/or dryness and/or mushiness of the shrimp examined in the cooked state.

§ 265.125 Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified in accordance with Part 260, Subpart A of this chapter (Regulations Governing Processed Fishery Products).

With respect to conformance with the declared commercial count, the lot shall be considered to be of the declared count if the number of deviant units in the sample does not exceed the acceptance number prescribed for the sample size in Part 260, Subpart A of this chapter. If a lot fails to meet the requirements of any specific commercial count, it shall be marked a mixed lot and shall not be

(o) "Unacceptable shrimp" refers to abnormal or diseased shrimp.
graded.

§ 265.131 Score sheet for frozen raw headless shrimp.

General	
Label	
Size and kind of container	
Container mark or identification	
Size of lot	
Number of samples	
Declared count per pound	
Actual net weight (ounces)	
Actual count per pound	
Descriptive size name	

Scored factors (table I)	Deductions
Frozen and thawed:	
1. Dehydration	
Thawed:	
2. Deterioration	
3. Black spot on shell or loose membrane only	
4. Black spot on meat	
5. Broken, damaged, and pieces	
6. Legs, loose shell, and flippers	
7. Heads and unacceptable shrimp	
8. Extraneous material	
9. Uniformity of size	
Cooked:	
10. Texture	
Total deductions	
Rating for scored factors (100 minus total deductions)	
Flavor and odor	
Final grade	

TABLE I—SCHEDULE OF DEDUCTIONS FOR FACTORS RATED BY SCORE POINTS

State	Factor	Description of quality variation			Deduct
Frozen and thawed	Dehydration	Dehydrated—exposed ends		Deterioration of meat	
		Frozen state	Thawed state	Thawed state	
		Up to 5 percent	None	None	0
		5.1–15.0 percent	Up to 2.0 percent	Slight	5
		Over 15.0 percent	2.1–5.0 percent	Moderate	9
			Over 5.0 percent	Marked	11
		(Percent by count of total sample.) Apply the one highest deduction only.			
Thawed	Deterioration	Off-odor, overall sample:			
		Slight			2
		Moderate			6
		Marked			11
		Any excessive, each 1 percent or fraction (percent by count)			4
	Black spot on shell or loose membrane only.	Shell affected, but not meat:			
		Not over 5 percent			0
		Each additional 5 percent, or fraction (percent by count)			1
	Black spot on meat	None			0
		Not over 3 percent			1
		3.1–5.0 percent			2
		Each additional 5 percent, or fraction (percent by count)			2
	Broken, damaged, and pieces	Not over 1 percent			0
		1.1–3.0 percent			2
		Each additional 3 percent, or fraction (percent by weight)			2
	Legs, loose shell, and flippers.	Not over 3 percent			0
		Each additional 3 percent, or fraction (percent by count)			2
	Heads and unacceptable shrimp.	Not over 1 percent			2
		Each additional 1 percent, or fraction (percent by count)			3
	Extraneous material	1 piece			1
		2 pieces			3
		Over 2 pieces			4
	Uniformity of size	Slightly large and slightly small: Each 3 percent, or fraction			1
		Exceedingly large and exceedingly small: Each 3 percent, or fraction (percent by count—based on actual count per pound of sample).			3
Cooked	Texture	Tough, dry, or mushy:			
		Slight			3
		Moderate			4
		Excessive			11

[1] This schedule of point deductions is based on the examination of sample unit composed of: (a) The contents of an entire package or (b) sufficient packages to provide a sample unit of 2 pounds or more, declared net weight.

TABLE II—WEIGHTS OF NONUNIFORM SHRIMP

[Ounces]

Count per pound	Exceedingly large	Slightly large	Slightly small	Exceedingly small
	Over—	Over—	Under—	Under—
8	2.70	2.50	1.50	1.38
9	2.40	2.23	1.33	1.18
10	2.16	2.00	1.20	1.06
11	1.96	1.82	1.09	.94
12	1.80	1.67	1.00	.87
13	1.66	1.54	.92	.80
14	1.54	1.43	.86	.74
15	1.44	1.33	.80	.69
16	1.35	1.25	.75	.65
17	1.27	1.18	.71	.61
18	1.19	1.11	.67	.56
19	1.14	1.05	.63	.55
20	1.08	1.00	.60	.52
21	1.03	.95	.57	.50
22	.98	.91	.54	.47
23	.94	.87	.52	.45
24	.90	.83	.50	.43
25	.86	.80	.48	.42
26	.83	.77	.46	.40
27	.80	.74	.44	.38
28	.77	.71	.43	.37
29	.74	.69	.41	.36
30	.72	.67	.40	.35
31	.70	.64	.39	.34
32	.67	.63	.38	.33
33	.65	.61	.36	.32
34	.64	.59	.35	.30
35	.63	.57	.34	.30
36	.60	.56	.33	.29
37	.58	.54	.32	.28
38	.57	.53	.31	.27
39	.56	.51	.31	.27
40	.54	.50	.30	.26
41	.53	.49	.29	.25
42	.51	.48	.29	.25
43	.50	.47	.28	.24
44	.49	.45	.27	.24
45	.48	.44	.27	.23
46	.47	.44	.26	.23
47	.46	.42	.26	.23
48	.45	.42	.25	.22
49	.44	.41	.24	.21
50	.43	.40	.24	.21
51	.42	.39	.24	.20
52	.42	.38	.23	.20
53	.41	.38	.23	.20
54	.40	.37	.22	.19
55	.39	.36	.22	.19
56	.39	.36	.21	.18
57	.38	.35	.21	.18
58	.37	.34	.21	.18
60	.37	.34	.20	.18
60	.36	.33	.20	.17
61	.35	.33	.20	.17
62	.35	.32	.19	.17
63	.34	.32	.19	.16
64	.34	.31	.19	.16
65	.33	.31	.18	.16
66	.33	.30	.18	.16
67	.32	.30	.18	.16
68	.32	.29	.18	.15
69	.31	.29	.17	.15
70	.31	.28	.17	.15
71	.30	.28	.17	.15

ALTERNATE TABLE II—WEIGHTS OF NONUNIFORM SHRIMP

[Grams]

Count per pound	Exceedingly large	Slightly large	Slightly small	Exceedingly small
	Over—	Over—	Under—	Under—
8	76.5	70.9	42.5	39.1
9	68.0	62.9	37.7	33.9
10	61.2	56.7	34.0	29.5
11	55.8	51.6	30.9	26.6
12	51.0	47.3	28.4	24.7
13	47.1	43.7	26.1	22.7
14	43.7	40.5	24.4	21.0
15	40.8	37.7	22.7	19.6
16	38.3	35.4	21.3	18.4
17	36.0	33.4	20.1	17.3
18	33.7	31.5	19.0	15.6
19	32.3	29.8	17.9	15.6
20	30.6	28.4	17.0	14.7
21	29.2	26.9	16.2	14.2
22	27.8	25.8	15.3	13.3
23	26.6	24.7	14.7	12.8
24	25.5	23.5	14.2	12.3
25	24.4	22.7	13.6	11.9
26	23.5	21.8	13.0	11.3
27	22.7	21.0	12.5	10.8
28	21.8	20.1	12.2	10.5
29	21.0	19.6	11.6	10.2
30	20.4	19.0	11.3	9.9
31	19.8	18.1	11.0	9.6
32	19.0	17.8	10.8	9.3
33	18.4	17.3	10.2	9.0
34	18.1	16.7	9.9	8.4
35	17.6	16.2	9.6	8.4
36	17.0	15.9	9.4	8.2
37	16.4	15.3	9.1	7.9
38	16.2	15.0	9.0	7.7
39	15.6	14.5	8.8	7.6
40	15.3	14.2	8.5	7.4
41	15.0	13.9	8.3	7.3
42	14.4	13.6	8.1	7.0
43	14.2	13.3	7.9	6.8
44	13.9	13.0	7.7	6.7
45	13.6	12.8	7.6	6.6
46	13.3	12.3	7.4	6.4
47	13.0	12.0	7.2	6.3
48	12.8	11.8	7.1	6.3
49	12.4	11.6	6.9	6.0
50	12.2	11.3	6.8	5.9
51	11.9	11.0	6.8	5.7
52	11.9	10.8	6.6	5.7
53	11.6	10.8	6.5	5.7
54	11.3	10.6	6.3	5.4
55	11.1	10.2	6.3	5.4
56	11.1	10.2	6.0	5.1
57	10.8	9.9	6.0	5.1
58	10.6	9.8	6.0	5.1
59	10.6	9.6	5.7	5.1
60	10.2	9.4	5.7	4.8
61	9.9	9.4	5.7	4.8
62	9.9	9.1	5.4	4.8
63	9.6	9.1	5.4	4.8
64	9.6	8.8	5.4	4.8
65	9.4	8.8	5.1	4.6
66	9.4	8.5	5.1	4.5
67	9.1	8.5	5.1	4.5
68	9.1	8.2	5.1	4.3
69	8.8	8.2	4.8	4.3
70	8.8	7.9	4.8	4.3
71	8.5	7.9	4.8	4.3

Subpart B—United States Standards for Grades of Frozen Raw Breaded Shrimp

§ 265.151 Product description.

Frozen raw breaded shrimp are whole, clean, wholesome, headless, peeled shrimp which have been deveined where applicable of the regular commercial species, coated with a wholesome, suitable batter and/or breading. Whole shrimp consist of five or more segments of unmutilated shrimp flesh. They are prepared and frozen in accordance with good manufacturing practice and are maintained at temperatures necessary for the preservation of the product. Individual shrimp and/or pieces consolidated into larger units and covered with breading are not considered for grading under this standard.

§ 265.152 Composition of the product.

(a) Frozen raw breaded shrimp shall contain not less than 50 percent by weight of shrimp material when the weight of the shrimp material is determined by the end product method as set forth in § 265.171(u).

(b) Shrimp material content of raw breaded shrimp may be determined by the on-line method as set forth in § 265.171(v): *Provided,* That the results are at least in compliance with the shrimp material content requirement of 50 percent by weight when verified by the official end product method.

(c) Production methods employed in official establishments shall be kept relatively constant for each product lot so as to minimize variations in any factor which may affect the relative shrimp material content.

§ 265.153 Styles.

(a) *Style I.* "Regular Breaded Shrimp" are frozen raw breaded shrimp containing a minimum of 50 percent of shrimp material.

(b) *Style II.* "Lightly Breaded Shrimp" are frozen raw breaded shrimp containing a minimum of 65 percent of shrimp material.

§ 265.154 Types.

(a) *Type I—Breaded fantail shrimp*—(1) *Subtype A.* Split (butterfly) shrimp with the tail fin and the shell segment immediately adjacent to the tail fin.

(2) *Subtype B.* Split (butterfly) shrimp with the tail fin but free of all shell segments.

(3) *Subtype C.* Split (butterfly) shrimp without attached tail fin or shell segments.

(b) *Type II—Breaded round shrimp*—(1) *Subtype A.* Round shrimp with the tail fin and the shell segment immediately adjacent to the tail fin.

(2) *Subtype B.* Round shrimp with the tail fin but free of all shell segments.

(3) *Subtype C.* Round shrimp without attached tail fin or shell segments.

(c) *Type III—Breaded split shrimp.* [Reserved]

§ 265.155 Grades.

(a) "U.S. Grade A" is the quality of frozen raw breaded shrimp that when cooked possesses a good flavor and odor, and that for those factors which are rated in accordance with the scoring system outlined in the following sections the total score is not less than 85 points.

(b) "U.S. Grade B" is the quality of frozen raw breaded shrimp that when cooked possesses a reasonably good flavor and odor, and that for those factors which are rated in accordance with the scoring system outlined in the following sections the total score is not less than 70 points.

(c) "Substandard" is the quality of frozen raw breaded shrimp that fail to meet the requirements of "U.S. Grade B."

§ 265.161 Ascertaining the grade.

General. In addition to considering other requirements outlined in the standard, the following quality factors are evaluated in ascertaining the grade of the product.

(a) Factors not rated by score points: Flavor and odor. Flavor and odor are determined by organoleptic means after the product has been cooked in a suitable manner (§ 265.171(w)).

(b) Factors rated by score points: The quality of the product with respect to factors scored is expressed numerically on the scale of 100. Deductions from the maximum possible score of 100 are assessed for essential variations of quality within each factor. The score of frozen raw breaded shrimp is determined by observing the product in the frozen and thawed states.

§ 265.162 Factors evaluated on the product in the breaded state.

(a) Factors affecting qualities that are measured on the product in the breaded state are uniformly of size, condition of coating, extraneous material, and damaged breaded shrimp. For the purpose of rating the factors that are scored in the breaded state, the schedule of point deduction in table 1 applies. This schedule of point deductions is

based on the examination of one complete individual package or intended package (sample unit) regardless of the net weight of the contents of the package.

(b) The factor—ease of separation in the frozen state—shall be rated in addition to all other factors when frozen raw breaded shrimp is lot inspected on a lot basis.

§ 265.163 Factors evaluated on unbreaded or thawed debreaded product.

Factors affecting qualities that are measured on the product in the unbreaded or thawed debreaded state are degree of deterioration, dehydrations, sand veins, black spot, extra shell, extraneous material, and swimmerets. For the purpose of rating the factors that are scored in the unbreaded or thawed debreaded state, the schedule of point deductions in table 2 applies. This schedule of point deductions is based on the examination of 20 whole shrimp selected from the processing line or from one or more packages. Examination of this sample of 20 whole shrimp is continued under § 265.171(u).

§ 265.164 Hygienic processing.

Frozen raw breaded shrimp shall be processed and maintained in accordance with the applicable requirements of the Good Manufacturing Practice Regulations contained in Part 128 of Title 21, CFR, and the applicable requirements contained in Part 260, Subpart A of this chapter.

§ 265.171 Definitions and methods of analysis.

(a) "Fantail shrimp": This type is prepared by splitting and peeling the shrimp except that for subtype A, the tail fin remains attached and the shell segment immediately adjacent to the tail fin remains attached. Subtype B, the tail fin remains, but the shrimp are free of all shell segments. Subtype C, the shrimp are free of tail fins and all shell segments.

(b) "Round shrimp": This type is the round shrimp, not split. The shrimp are peeled except that for subtype A, the tail fin remains attached and the shell segment immediately adjacent to the tail fin remains attached. Subtype B, the tail fin remains, but the shrimp are free of all shell segments. Subtype C, the shrimp are free of all shell segments and tail fins.

(c) Good flavor and odor: "Good flavor and odor", essential requirements for a Grade A product, means that the cooked product has flavor and odor characteristics of freshly caught or well-refrigerated shrimp and the breading is free from staleness and off-flavors and off-odors of any kind. Iodoform is not to be considered in evaluating the product for flavor and odor.

(d) Reasonably good flavor and odor: "Reasonably good flavor and odor" minimum requirements of Grade B products, means that the cooked product may be somewhat lacking in the good flavor and odor characteristics of freshly caught or well-refrigerated shrimp but is free from objectionable off-flavors and objectionable off-odors of any kind.

(e) "Dehydration" refers to the occurrence of whitish areas on the exposed ends of the shrimp (due to the drying of the affected area) and to a generally desiccated appearance of the meat after the breading is removed.

(f) "Deterioration" refers to any detectable change from the normal good quality of freshly caught shrimp. It is evaluated by noting in the thawed product deviations from the normal odor and appearance of freshly caught shrimp.

(g) "Extraneous material" consists of nonedible material such as sticks, seaweed, shrimp thorax, or other objects that may be accidently present in the package.

(h) Slight: "Slight" refers to a condition that is scarcely noticeable but does affect the appearance, desirability, and/or eating quality of breaded shrimp.

(i) Moderate: "Moderate" refers to a condition that is conspicuously noticeable but that does not seriously affect the appearance, desirability, and/or eating quality of the breaded shrimp.

(j) Marked: "Marked" refers to a condition that is conspicuously noticeable and that does seriously affect the appearance, desirability, and/or eating quality of the breaded shrimp.

(k) Excessive: "Excessive" refers to a condition that is very noticeable and is seriously objectionable and the product cannot be graded above Grade B; this is a limiting rule.

(l) Halo: "Halo" means and easily recognized fringe of excess batter and breading extending beyond the shrimp flesh and adhering around the perimeter or flat edges of a split (butterfly) breaded shrimp.

(m) Balling up: "Balling up" means the adherence of lumps of the breading material to the surface of the breaded coating, causing the coating to appear rough, uneven, and lumpy.

(n) Holidays: "Holidays" means voids in the breaded coating as evidenced by bare or naked spots.

(o) Damaged frozen raw breaded shrimp: "Damaged frozen raw breaded shrimp" means frozen raw breaded shrimp that have been separated into two or more parts or that have been crushed or otherwise mutilated to the extent that their appearance is materially affected.

(p) Black spot: "Black spot" means any blackened area that is markedly apparent on the flesh of the shrimp.

(q) Sand vein: "Sand vein" means any black or dark sand vein that has not been removed, except for that portion under the shell segment adjacent to the tail fin when present.

(r) Extra shell: "Extra shell" means any shell segment(s) or portion thereof, contained in the breaded shrimp except the first segment adjacent to the tail fin for Type I, subtype A, and Type II, subtype A.

(s) Net weight: Net weight is determined by use of a balance and by following steps given below:

1. Remove the overwrap.
2. Weigh carton and all contents.
3. Transfer breaded shrimp to balance and weigh.
4. Weigh carton less shrimp but including waxed separators and inserts (if used), crumbs, and frost.
5. Remove crumbs and frost from carton and separators.
6. Weigh cleaned carton and separators.
7. Net weight of the shrimp is the weight of the shrimp and of any loose breading and frost, exclusive of packaging material. The amount of loose breading and frost shall not exceed the limits of good manufacturing practices.

(t) Uniformity: "Uniformity" is determined for packs of various sizes by the ratio of the weights of the largest to the smallest breaded shrimp as outlined by the following schedule:

Up to 10 oz.	3 largest/3 smallest
10.1 oz. to 1.5 lb.	6 largest/6 smallest
1.51 lb. to 2.5 lb.	8 largest/8 smallest
Over 2½ lb.	10 largest/10 smallest

(u) Percent shrimp material—official end product method:

(1) Equipment needed:

(i) Two-gallon container approximately 9 inches in diameter.

(ii) Two-vaned wooden paddle, each vane measuring approximately 1¾ inches by 8¾ inches.

(iii) Stirring device capable of rotating the wooden paddle at 120 rpm.

(iv) Balance accurate to 0.01 ounce (0.1 gram).

(v) U.S. standard sieve—½-inch sieve opening; 12-inch diameter.

(vi) U.S. standard sieve—No. 20, 12-inch diameter.

(vii) Forceps, with blunt points.

(viii) Shallow baking pan.

(ix) Rubber policeman to remove bits of breading from shrimp.

(2) Procedure:

(i) Weigh sample (20 shrimp) to be debreaded. Fill container three-fourths full of water at 70°–80° F. Suspend the paddle in the container leaving a clearance of at least 5 inches below the paddle vanes, and adjust speed to 120 rpm. Add shrimp and stir for 10 minutes. Stack the sieves, the ½-inch mesh over the No. 20 and pour contents of container onto them. Set the sieves under a faucet, preferably with spray attached, and rinse the shrimp without rubbing the flesh, being careful to keep all rinsings over the sieves and not having the stream of water hit the shrimp on the sieve directly. Use a rubber policeman to remove adhering breading. Lay the shrimp out singly on the sieve as rinsed, split side down and tails up. Remove top sieve and drain on a 45-degree angle for 2 minutes, then transfer shrimp to balance. Rinse contents of the No. 20 sieve onto a shallow baking pan and collect any particles of shrimp material (flesh, tail fin), and add to shrimp on balance and weigh.

(ii) Calculate percent shrimp material.

$$\text{Percent shrimp material} = \frac{\text{Weight of debreaded sample (20 shrimp)}}{\text{Weight of sample (20 shrimp)}} \times 100 \div 2$$

(v) Percent shrimp material—on-line method: Percent shrimp material determined by the on-line method refers to the percent by weight of shrimp material in a sample as described below:

(1) Equipment needed:

(i) Water bath (a container with a 3- to 4-liter capacity).

(ii) Balance accurate to 0.1 gram or 0.01 ounce.

(iii) Stop-watch or regular watch readable to a second.

(iv) U.S. Standard sieve—½-inch sieve opening; 12-inch diameter.

(v) U.S. Standard sieve No. 20, 12-inch diameter.

(vi) Thermometer (immersion type accurate to ±2° F.).

(vii) Forceps, with blunt points.

(viii) Shallow pan.

(ix) Rubber policeman to remove bits of breading from shrimp.

(2) Procedure:

(i) Select in a random manner, a composite sample of 20 unfrozen raw breaded shrimp from production line(s). Weigh the composite sample on a scale, determining the weight of the sample to the nearest 0.1 gram or 0.01 ounce. Place the sample in a water bath filled to three-fourths capacity and in a container maintained at 60° F.–85° F. After shrimp are submerged in water and breading becomes soft, a "gentle" swirling action with hands may be applied to the shrimp to speed up the removal of the breading. Stack the sieves, the ½-inch mesh over the No. 20 and pour contents of container into them. Remove top sieve and drain on 45-degree angle for 2 minutes then transfer shrimp to balance. Rinse contents of No. 20 sieve onto a shallow pan and collect any particles of shrimp material (flesh, tail fin, etc.), and add to the shrimp on the balance and then weigh.

(ii) Calculate percent shrimp material:

$$\text{Percent shrimp material} = \frac{\text{Weight of debreaded sample}}{\text{Weight of sample}} \times 100$$

(iii) Frequency of on-line shrimp material content determination. A minimum of three determinations of shrimp material content shall be carried out for small production runs or lots of the same style product, i.e., 3 x (20 unfrozen raw breaded shrimp). For larger production runs or lots of the same style product, a minimum of one determination, i.e., 1 x (20 unfrozen raw breaded shrimp) shall be carried out for every hour of production of product of the same style.

(w) Cooked in a suitable manner: "Cooked in a suitable manner" means cooked in accordance with the instructions accompanying the product. If, however, specific instructions are lacking, the product for inspection is cooked as follows:

(1) Transfer the breaded shrimp, while still frozen, in a wire mesh deep fry basket sufficiently large to hold the shrimp in a single layer without touching one another.

(2) Lower the basket into a suitable liquid oil or hydrogenated vegetable oil at 350°–375° F. Cook for 3 minutes, or until the shrimp attain a pleasing golden brown color.

(3) Remove basket from the oil and allow the shrimp to drain for 15 seconds. Place the cooked shrimp on a paper towel or napkin to absorb the excess oil.

§ 265.172 Use of alternate methods of shrimp material determination.

(a) The official end product method in § 265.171(u) for determining shrimp material content shall be used for lot inspection, appeal inspection, and inspection for verification in official establishments when the on-line method is used.

(b) The on-line method in § 265.171(v)(2) for determining shrimp material content may be used during processing operations.

§ 265.175 Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified in accordance with Part 260, Subpart A of this chapter. (Regulations Governing Processed Fishery Products.)

TABLE 1—SCHEDULE OF POINT DEDUCTIONS FOR RATING IN BREADED STATE

Factor	Quality description	Deductions allowed
		Points
1. Ease of separation in the frozen state.	Separate easily after being removed from carton and exposed to room temperature for not more than 4 minutes.	3
	Separate easily after being removed from carton and exposed to room temperature for not more than 6 minutes.	6
	Does not separate easily after being removed from carton and exposed to room temperature for 6 minutes.	10
2. Uniformity	Ratio of weight of largest to smallest breaded shrimp in sample unit as defined under section 262.21 (T):	
	Up to 1.50	0
	1.51–1.60	1
	1.61–1.70	2
	1.71–1.80	3
	1.81–1.90	4
	1.91–2.00	5
	2.01–2.10	6
	2.11–2.20	7
	2.21–2.30	8
	2.31–2.40	9
	Over 2.40	10
3. Condition of coating	Degree of halo or balling up or holidays (identify type of defect by circling the proper word):	
	Slight—each 20 percent by count or fraction thereof	1
	Moderate—each 20 percent by count or fraction thereof	2
	Marked—each 20 percent by count or fraction thereof	4
	Excessive—each 20 percent by count or fraction thereof	10
4. Damaged breaded shrimp	For each 5 percent by count or fraction thereof	1
	Tail fin broken or missing each 5 percent or fraction thereof (except in Type I, subtype C, and Type II, subtype C).	3
5. Extraneous material	If extraneous material, except filthy or deleterious substances, is found in more than one package per lot, the entire lot shall be declared substandard.[1]	

[1] Filthy or deleterious substances in food products constitute a violation of the Food, Drug, and Cosmetic Act. Products containing such substances are ineligible for the purpose of applying this document.

TABLE 2—SCHEDULE OF POINT DEDUCTIONS FOR EXAMINATION IN UNBREADED OR THAWED DEBREADED STATE.

[Subtotals brought forward]

Factor	Quality description	Deductions allowed
		Points
1. Degree of dehydration	Slight—each shrimp	1
	Moderate—each shrimp	3
	Marked—each shrimp	5
	Excessive—each shrimp	10
2. Deterioration	Slight—each shrimp	1
	Moderate—each shrimp	5
	Marked—each shrimp	10
	Excessive—each shrimp (provided that, if excessive deterioration occurs in more than one sample unit per sample, the entire lot shall be declared substandard).	20
3. Sand veins where applicable[1].	For each dark vein present deduct according to the following schedule:	
	Equivalent in length to two segments	1
	Equivalent in length to three segments	2
	Equivalent in length to four or more segments	3
4. Black spot	Slight but obvious, on average	3
	Moderate, on average	
	Marked—each shrimp	65
5. Extra shell (see subtypes definition).	(Beyond first segment adjacent to tail fin only for Type I, subtype A, and Type II, subtype A):	
	Less than one whole extra shell segment	1
	One extra segment or more	3
6. Swimmerets	For last pair only adjacent to tail fins	1
	For more than last pair	3
7. Extraneous material	If extraneous material, except filthy or deleterious substances, are found in more than one package per lot, the entire lot shall be declared substandard.[2]	

[1] Deduction points for sand veins shall not be applied to shrimp smaller than 70 count per pound in the raw, headless state. The corresponding size in the breaded state is 40 count per pound and 80 count per pound in the peeled state.

[2] Filthy or deleterious substances in food products constitute a violation of the Food, Drug, and Cosmetic Act. Products containing such substances are ineligible for the purpose of applying this document.

PART 266—UNITED STATES STANDARDS FOR GRADES OF MOLLUSCAN SHELLFISH PRODUCTS

Subpart A—United States Standards for Grades of Frozen Raw Scallops

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266.151 Product description.
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266.171 Definitions and methods of analysis.
266.175 Tolerances for certification of officially drawn samples.

AUTHORITY: 7 U.S.C. 1621–1630.

§ 266.101 Description of the product.

Frozen raw scallops are clean, wholesome, adequately drained, whole or cut adductor muscles of the scallop of the regular commercial species. The portion of the scallop used shall be only the adductor muscle "eye" which controls the shell movement. Scallops shall be washed, drained, packed, and frozen in accordance with good manufacturing practices and are maintained at temperatures necessary for the preservation of the product. Only scallops of a single species shall be used within a lot.

§ 266.102 Styles.

(a) *Style I.* Solid pack scallops are frozen together into a solid mass.

(1) *Substyle a.* Glazed.

(2) *Substyle b.* Not glazed.

(b) *Style II.* Individually quick-frozen pack (IQF) scallops are individually quick frozen. Individual scallops can be separated without thawing.

(1) *Substyle a.* Glazed.

(2) *Substyle b.* Not glazed.

§ 266.103 Types.

(a) *Type 1.* Adductor muscle.

(b) *Type 2.* Adductor muscle with catch (gristle or sweet meat) portion removed.

§ 266.104 Grades.

(a) "U.S. Grade A" is the quality of frozen raw scallops that (1) possess good flavor and odor and that (2) for those factors that are rated in accordance with the scoring system outlined in this part, have a total score of 85 to 100 points.

(b) "U.S. Grade B" is the quality of frozen raw scallops that (1) possess at least reasonably good flavor and odor, and that (2) rate a total score of not less than 70 points for these factors of quality that are rated in accordance with the scoring system outlined in this part.

(c) "Substandard" is the quality of frozen raw scallops that meets the requirements of § 266.101, *Description of the product*, but otherwise fails to meet the requirements of "U.S. Grade B."

§ 266.111 Determination of the grade.

In a plant under Contract USDC Inspection, the grade is determined by examining the product for factors 1–5 in the fresh or thawed state and Factor 6 in the cooked state. For lot inspection, examination of the product for Factor 1 is carried out in the frozen state and 2–5 in the thawed state. Factor 6 is examined in the cooked state.

(a) *Factors rated by score points.* Points are deducted for variation in the

quality of each factor in accordance with the schedule in Table 1. The total of points deducted is subtracted from 100 to obtain the score. The maximum score is 100, the minimum score is 0.

(b) *Factors not rated by score points.* The factor of "Flavor and odor" is evaluated organoleptically by smelling and tasting the product in the cooked state.

(1) Good flavor and odor (essential requirements for a U.S. Grade A product) means that the product has the typical flavor and odor of the species and is free from bitterness, staleness, and off-flavor and off-odors of any kind.

(2) Reasonably good flavor and odor (minimum requirements for a U.S. Grade B product) means the product is lacking in good flavor and odor but is free from objectionable off-flavors and off-odors of any kind.

§ 266.121 Definitions and methods.

(a) *Selection of the sample unit.* The sample unit shall consist of the primary container and its entire contents. The number and size of sample units to be examined shall be as indicated in § 266.125.

(b) *Examination of sample, frozen state.* When this product is examined under Contract USDC Inspection, the samples are examined for Factor 1 in Table 1 in the fresh or thawed state. When the product is lot inspected, the samples are examined for Factor 1, in Table 1 in the frozen state.

TABLE 1—SCHEDULE OF POINT DEDUCTIONS PER SAMPLE

Factors scored	Method of determining score	Deduct
FROZEN STATE		
1 Dehydration	Small degree: Easily scraped off of each 10 percent of top surface affected.	2
	Large degree: Deep dehydration not easily scraped off, affecting each 10 percent of surface.	4
FRESH OR THAWED STATE		
2 Undesirable pieces.	Percent by weight:	
	Up to 5 percent	1
	Over 5 percent—not over 10 percent.	6
	Over 10 percent	15
3 Uniformity	Weight ratio:	
	Over 2.5—not over 3.0	4
	Over 3.0—not over 3.3	6
	Over 3.3	10
4 Color	Each 10 percent by count of nonuniform colored scallops in excess of the 10 percent of nonuniform colored scallops permitted.	10
5 Extraneous material.	Minor: Each instance of minor extraneous material in the sample unit per pound.	1
	Major: Each instance of major extraneous material in the sample unit per pound.	5
		0
		5
COOKED STATE		
6 Texture	Firm but tender and moist	
	Small degree: Moderately tough, dry, and fibrous or mushy.	
	Large degree: Excessively tough, dry and fibrous or mushy.	15

(1) "Dehydration" refers to the loss of moisture from the scallops surface during frozen storage. Small degree of dehydration is color-masking but can be easily scraped off. Large degree of dehydration is deep, color-masking, and requires a knife or other instrument to scrape it off.

(c) *Examination of sample, thawed state.* When necessary, thawing the sample is best accomplished by enclosing it in a water impermeable film-type bag and immersing in an agitated water bath at 68° F.±2° F. The complete thawing of the product is determined by gently squeezing the bag occasionally until no hard core or ice crystals are felt.

(1) Undesirable small pieces are pieces which will pass through the openings in a ¾-inch sieve for larger size scallops. For the smaller scallops, such as bay scallops, undesirable pieces are pieces of scallops that do not have the general conformation of the other scallops. The total weight of these pieces within a sample unit will be obtained. These pieces shall not be used for determining the weight ratio.

(2) Uniformity of size refers to the degree of weight uniformity of the individual scallops. This factor is measured by obtaining a weight ratio between the largest and smallest scallops. The determination is made on the thawed scallops by dividing the total weight of the 15 percent (by count) of the largest scallops by the 15 percent (by count) of the smallest scallops.

(3) "Color" refers to reasonably uniform color characteristics of the species used within an individual container. Only noticeable variation in color from the predominating color of the scallops in the container is considered. Medium gray to black colored scallops are not to be graded.

(4) "Extraneous materials" are pieces or fragments of undesirable material that are naturally present in or on the scallops and which should be removed during processing.

(i) An instance of minor extraneous material includes but is not limited to each occurrence of intestines, seaweed, etc., and each aggregate of sand and grit up to ½-inch square and located on the scallop surface. Deduction points shall be assessed for additional instances of intestines, seaweed, etc., and aggregates of sand and grit up to ½-inch square.

(ii) An instance of major extraneous material includes but is not limited to each instance of shell or aggregate of embedded sand or other extraneous embedded material that affects the appearance or eating quality of the product.

(d) *Examination of sample, cooked state.* Cooked state means the state of the sample after being cooked. Boil in bag method: Place at least 25 percent by weight of the thawed sample from each sample unit into a boilable film-type pouch and seal. Submerge the pouch and its contents into boiling water for about 3 to 4 minutes or until cooked. Bake method: Alternatively the product is placed into a baking pan lined with aluminum foil. A cover of aluminum foil is crimped around the edges of the top of the pan. The pan is placed in an oven that has been pre-heated to 450° F. for 20 minutes or until cooking has been completed. Flavor and odor and texture shall be evaluated in the cooked state.

(1) "Texture" refers to the firmness, tenderness, and moistness of the cooked scallop meat, which is characteristic of the species.

(e) *General definitions.* (1) "Small" (overall assessment) refers to a condition that is noticeable but is only slightly objectionable.

(2) "Large" (overall assessment) refers to a condition that not only is noticeable but is seriously objectionable.

(3) "Minor" (individual assessment) refers to a defect that slightly affects the appearance and/or utility of the product.

(4) "Major" (individual assessment) refers to a defect that seriously affects the appearance and/or utility of the product.

(5) "Net weight" means the total weight of the scallop meats within the package after removal of all packaging materials, ice glaze, or other protective materials.

§ 266.125 Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified in accordance with Part 260, Subpart A of this chapter (Regulations Governing Processed Fishery Products).

Subpart B—United States Standards for Grades of Frozen Fried Scallops

§ 266.151 Product description.

Frozen fried scallops are prepared from wholesome, clean, adequately drained, whole or cut adductor muscles sea scallop, or scallop units cut from a block of frozen sea scallops, that are coated with wholesome batter and breading and precooked in oil or fat. They are packaged and frozen according to good commercial practice and are maintained at temperatures necessary for preservation. Frozen fried scallops contain a minimum of 60 percent by weight of scallop meat.

§ 266.152 Styles.

The styles of frozen fried scallops include:

(a) *Style I Random pack.* Scallops in a package are reasonably uniform in weight and/or shape. The weight or shape of individual scallops are not specified.

(b) *Style II Uniform pack.* Scallops in a package consist of uniform shaped pieces which are of specified weight or range of weights.

§ 266.153 Grades of frozen fried scallops.

(a) "U.S. Grade A" is the quality of frozen fried scallops that possess good flavor and odor; and for those factors of quality which are rated according to the scoring system outlined in this part, the total score is not less than 85 points.

(b) "U.S. Grade B" is the quality of frozen fried scallops that possess at least reasonably good flavor and odor; and for those factors of quality which are rated according to the scoring system outlined

in this part, the total score is not less than 70 points.

(c) "Substandard" is the quality of frozen fried scallops that fail to meet the requirements of U.S. Grade B.

§ 266.161 Ascertaining the grade.

The grade of frozen fried scallops is determined by examining the product in the frozen and cooked states. Factors of quality evaluated in ascertaining the grade of the product are flavor and odor, appearance, uniformity, absence of defects, and character.

(a) Flavor and odor are rated directly by organoleptic evaluation. Score points are not assessed (see § 266.162).

(b) Appearance, uniformity, absence of defects, and character are rated numerically on a scale of 100. The maximum number of points that may be given each of these factors are:

Factors:	Points
Appearance	[1] 25
Uniformity	[1] 20
Workmanship defects	40
Character	[1] 15
Total possible score	100

[1] Frozen fried scallops which receive the maximum number of deduction points for any of these factors shall not be graded above Substandard regardless of the total score for the product. This is a limiting rule.

§ 266.162 Evaluating the unscored factor of flavor and odor.

(a) "Good flavor and odor" (essential requirements for a Grade A product) means that the cooked product has flavor and odor characteristics of good scallop meat and of the breading and is free from staleness and off-flavors and off-odors of any kind.

(b) "Reasonably good flavor and odor" (minimum requirements of a Grade B product) means that the cooked product is lacking in good flavor and odor, but is free from objectionable off-flavors and off-odors of any kind.

(c) "Substandard flavor and odor" (Substandard grade) means that the flavor and odor fails to meet the minimum requirements of "reasonably good flavor and odor."

§ 266.163 Evaluating and rating the scored factors of appearance, uniformity, workmanship defects, and character.

Point deductions are allotted for each degree or amount of quality variation within each of the factors that are scored. The net score for each quality factor is obtained by subtracting the deduction-points assessed for that factor from the maximum points allotted to that factor. The total score for the product is the sum of the net scores for the four individually scored factors.

§ 266.164 Appearance.

(a) Appearance refers to the condition of the package and ease of separation in the frozen state and continuity and color in the cooked state.

(1) "Condition of the package" refers to freedom from packaging defects and the presence in the package of oil, and/or loose breading, and/or frost. Deduction points are based on the degree of the improper condition as small or large.

(2) "Ease of separation" refers to the difficulty of separating scallops that are frozen together after the frying operation and during freezing.

(3) "Continuity" refers to the completeness of the coating of the product in the cooked state. Lack of continuity is exemplified by breaks, ridges and/or lumps of breading. Each 1/16 square inch area of any break, ridge, or lump of breading is considered an instance of lack of continuity. Individual breaks, ridges, or lumps of breading measuring less than 1/16 square inch are not considered objectionable. Deduction points are based on the percentage of the scallops within the package that contain small and/or large instances of lack of continuity.

(4) "Color" refers to reasonably uniform color which is characteristic of the product in the cooked state. Deviations in color are visually measured as "small" and "large". A "small" instance of deviation in color means that the scallop varies noticeably from the predominating color of the package. A "large" instance of deviation in color means that the scallop varies markedly from the predominating color of the package. The deduction points assessed are based on the degree of deviation as small or large and the percentage by count of the scallops affected in the package.

(b) For the purpose of rating the factor of appearance, the schedule of deduction points in Table I applies. Frozen fried scallops which receive 25 deduction points for the factor of appearance shall not be graded above Substandard regardless of the total score for the product. This is a limiting rule.

TABLE I—SCHEDULE OF POINT-DEDUCTIONS FOR VARIATIONS IN APPEARANCE

Appearance subfactors	Method of determining subfactor score	Percent of scallops affected		Deduction points
		Over—	Not over—	
	Degree of condition of the package			
Condition of the package in the frozen state.	(a) Small (moderate amount of free oil and/or loose breading, and/or frost, and/or packaging defects)[1]			2
	(b) Large (excessive amount of free oil, and/or loose breading, and/or frost, and/or packaging defects)[1]			6
	Degree of ease of separation			
Ease of separation of the scallops in frozen state.	Moderate (scallops separated by hand with difficulty)[1]	0	30	1
		30	70	2
		70		3
	Severe (scallops separated only by use of knife or other instrument).	0	30	4
		30	70	10
		70		15
	Lack of continuity (breaks, ridges, and lumps)[1]	0	20	2
		20	50	4
		50	70	6
Continuity of the scallops in the cooked state.	Small (1 to 3 instances per scallop)	70		10
	Large (over 3 instances per scallop)	0	20	4
		20	50	8
		50	70	12
		70		25
	Deviation from predominating color of fried scallops in cooked state			
Color of the scallops in the cooked state.	Small instance of deviation in color means that the scallop varies noticeably from the predominating color of the package after cooking.	0	10	0
		10	30	2
		30		4
	Large instance of deviation in color means that the scallop varies markedly from the predominating color of the package after cooking.	0	10	4
		10	30	10
		30		25

[1] Each 1/16 square inch is considered an instance.

§ 266.165 Uniformity.

(a) Uniformity refers to the degree of freedom from undesirably small pieces and to the degree of uniformity of the weights of the frozen fried scallops within the package.

(1) For Style I, deduction points are assessed for (i) undesirable small pieces as determined by the percent by count of pieces passing through a sieve with 3/4 inch openings, and (ii) uniformity of size of the scallops remaining in the sieve as determined by the ratio of the weight of the 15 percent largest scallops (minimum three) divided by the 15 percent smallest scallops (minimum three). The number constituting this percentage shall be the closest approximation of 15 percent, determined by count.

(2) For Style II, deduction points are based on the percentage by count of small or large scallops deviating from the average weight within the package.

(b) For the purpose of rating the factor of uniformity, the schedules of deduction points in Table II apply. Frozen fried scallops which receive 20 deduction points for this factor shall not be graded above Substandard regardless of the total score for the product. This is a limiting rule.

TABLE II—SCHEDULE OF POINT-DEDUCTIONS FOR UNIFORMITY

Factor	Method of determining subfactor score			Deduction points
		Percent of scallops affected		
	A. Style I (Random pack)	Over—	Not over—	
	(a) Undesirable small pieces which pass through a sieve with ¾ inch openings.	0	10	3
		10	20	6
		20	----------	10
		Ratio		
		Over—	Not over—	
Uniformity of size and weight of scallops in frozen state.	(b) Weight ratio of scallops remaining in the sieve. The 15 percent largest scallops (minimum 3) divided by the 15 percent smallest scallops (minimum 3). The 15 percent to be determined by count.	----------	2.0	0
		2.0	2.5	1
		2.5	2.9	3
		2.9	3.3	6
		3.3	----------	10
		Percent of scallops affected		
	B. Style II (Uniform pack)	Over—	Not over—	
	Deviation from average weight			
	(a) Small (scallops deviating −10 to 20 percent from average weight).	0	30	3
		30	70	5
		70	----------	10
	(b) Large (scallops deviating over +20 percent from average weight).	0	30	6
		30	70	10
		70	----------	20

§ 266.166 Workmanship defects.

(a) Workmanship defects refers to the degree of freedom from doubled and misshaped scallops, pieces of shell fragments and extraneous material. The defects of doubled and misshaped scallops are determined by examining the frozen product, whereas the defects of shell fragments and extraneous materials are determined by examining the product in the cooked state. Deduction points are based on the percentage by count of the scallops affected within the package, or the relationship between the number of defect instances and the number of scallops within the package.

(1) *Doubled scallops.* Two or more scallops that are joined together during the breading and/or frying operations.

(2) *Misshaped scallops.* Elongated, flattened, mashed or damaged scallop meats.

(3) *Extraneous material.* An instance of extraneous material refers to an occurrence or group of occurrences of extraneous material in a scallop. Extraneous material consists of sand, grit, intestines, seaweed, and substances foreign to the scallop meat, except for shell fragments.

(4) *Piece of shell fragment.* The presence in the scallops of any fragment of the scallop shell regardless of size.

(b) For the purpose of rating the factor of absence of defects the schedules of deduction points in Tables III and IV apply.

TABLE III—SCHEDULE OF POINT-DEDUCTIONS FOR WORKMANSHIP DEFECTS SUBFACTORS MISSHAPED OR DOUBLE SCALLOPS AND SHELL FRAGMENTS

Defect subfactors	Method of determining subfactor score			Deduction points
		Percent of scallops affected		
		Over—	Not over—	
Misshaped or doubled scallops in the frozen state.	Misshaped scallops (elongated, flattened, mashed or damaged scallop meats).	0	10	3
		10	20	7
	Doubled scallops (two or more scallops joined together during breading and/or frying operation).	20	----------	15
Shell fragments in the cooked state.	Each piece of shell fragment is considered an instance.	0	5	15
		5	10	30
		10	----------	40

TABLE IV—SCHEDULE OF POINT-DEDUCTIONS FOR WORKMANSHIP DEFECTS SUBFACTOR OF EXTRANEOUS MATERIAL

Number of scallops per 7 ounces	Number of instances of extraneous material								
	0	1	2	3	4	5	6	7	8 or more
	Deduction points								
10 or less	0	7	15	25	40	----	----	----	------
11	0	6	13	25	40	----	----	----	------
12	0	5	13	25	40	----	----	----	------
13	0	5	11	25	40	----	----	----	------
14	0	4	10	16	28	40	----	----	------
15	0	4	9	16	28	40	----	----	------
16	0	3	8	13	25	40	----	----	------
17	0	3	8	12	20	30	40	----	------
18	0	2	7	10	18	28	40	----	------
19	0	2	6	9	15	25	40	----	------
20 or more	0	2	5	8	12	20	30	40	------

§ 266.167 Character.

(a) Character refers to the texture of the scallop meat and of the coating and the presence of gristle in the cooked state. Deduction points are based on the degree of variation in the texture attributes of the coating and scallop meat or the relationship between the number of instances and the number of scallops within the package.

(1) *Gristle.* An instance of gristle refers to an occurrence of the tough elastic tissue usually attached to the scallop meat.

(2) *Texture* refers to the firmness tenderness, and moistness of the cooked scallop meat and to the crispness and tenderness of the coating of the cooked product. The texture of the scallop meat may be classified as a degree of mushiness, toughness, and fibrousness. The texture of the coating may be classified as a degree of pastiness, toughness, dryness, mushiness, or oiliness.

(b) For the purpose of rating the factor of character, the schedules of deduction points in Table V and VI apply. Frozen fried scallops which receive 15 deduction points for the factor of character shall not be graded above Substandard regardless of the total score for the product. This is a limiting rule.

TABLE V—SCHEDULE OF POINT-DEDUCTIONS FOR CHARACTER SUBFACTOR OF TEXTURE

Character subfactors	Method of determining subfactor score	Deduction points
	Texture of the coating	
Texture in the cooked state.	Firm or crisp but not tough, pasty, mushy, or oily	0
	Moderately tough, pasty, mushy, or oily	5
	Excessively tough, pasty, mushy, or oily	15
	Texture of the scallop meat	
	Firm, but tender and moist	0
	Moderately tough, dry, and/or fibrous or mushy	5
	Excessively tough, dry, and/or fibrous or mushy	15

TABLE VI—SCHEDULE OF POINT-DEDUCTIONS FOR CHARACTER SUBFACTOR OF GRISTLE

Number of scallops per 7 ounces	Number of instances of gristle								
	0	1	2	3	4	5	6	7	8 or more
	Point deductions								
10 or less	0	2	4	6	8	10	----	----	------
11	0	2	4	6	8	10	----	----	------
12	0	2	4	6	8	10	----	----	------
13	0	1	3	5	8	10	----	----	------
14	0	1	3	5	7	9	10	----	------
15	0	1	2	4	6	8	10	----	------
16	0	1	2	4	6	8	10	----	------
17	0	1	2	4	6	8	10	----	------
18	0	1	2	3	4	6	8	10	------
19	0	1	2	3	4	6	8	10	------
20 or more	0	1	2	3	4	6	8	10	------

§ 266.171 Definitions and methods of analysis.

(a) *Percent of scallop meat* refers to percent, by weight, of scallop meat in a sample as determined by the following method:

(1) *Equipment needed.* (i) Water bath (3 to 4 liter beaker).

(ii) Balance accurate to 0.1 gram.

(iii) Clip tongs of wire, plastic, or glass.

(iv) Stop-watch or regular watch with second hand.

(v) Paper towels.

(vi) Spatula, 4-inch blade with rounded tip.

(2) *Procedure.* (i) Weigh all scallops in the sample while still in a hard frozen condition.

(ii) Place each scallop individually in the water bath which is maintained at 63° to 86° F. and allow the scallop to remain until such time as the breading becomes soft and can easily be removed from the still frozen meat (between 10 to 30 seconds for scallops held in storage at 0° F.).

(iii) Remove the scallop from the bath; blot lightly with double thickness paper toweling; and scrape off or pick out coating from the scallop meat with the spatula or nutpicker.

(iv) Weigh all "debreaded" scallop meats.

(v) Calculate the percent of scallop meat in the sample by following formula:

$$\text{Percent scallop meat} = \frac{\text{Weight of scallop meats (iv)}}{\text{Weight of frozen fried scallops (i)}} \times 100$$

(b) *Cooked state.* Cooked state shall mean that the product shall be cooked in accordance with the instructions accompanying the product. If specific instructions are lacking, the product for inspection shall be cooked as follows: Spread the frozen scallops on a foil covered baking sheet or a shallow pan. Place sheet or pan and frozen contents at the mid point of a properly ventilated oven preheated to 400 degrees Fahrenheit until thoroughly cooked, 15 to 20 minutes.

(c) *Definitions.* (1) "Moderate" refers to a scored condition that is readily noticeable but is not seriously objectionable.

(2) "Excessive" refers to a condition that is very noticeable and is seriously objectionable.

(3) "Instance" refers to an occurrence of an individual scored subfactor on a scallop.

§ 266.175 Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified in accordance with Part 260, Subpart A of this chapter. (Regulations Governing Processed Fishery Products.)

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